SELL YOUR MICRO FREE! See page 47

# NEW COMPUTER EXPRESS

First news, best buys – every week ● Issue 45 ● Sept 16 1989 ● 58p

## PC

- IBM price shock
- New portables
- Speech recognition

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- Genlock out soon
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- New music package

## AMIGA

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- Data Protection Act
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# PC PIRATES UNDER FIRE

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### Nintendo games copied by Nottingham firm

# CONSOLE PIRATES IN BRITAIN

**Using a £150 kit available from Taiwan, a Nottingham firm is pirating Nintendo cartridges, removing title and credits and selling them on for as little as £2 each.**

The company is also using the system to compile compendium cartridges containing up to 60 top Nintendo games. It's so easy to use that newly released Japanese games can be imported, pirated and distributed in the UK in less than 24 hours.

The system used is a sophisticated copier that transfers Nintendo cartridge program data to cassette tape before reloading it to electrically-erasable ROM chips – EEPROMs. It also allows pirates to modify Nintendo code and base new games on the stolen sprites with little programming knowledge. By simply capturing a sprite and moving it around a screen with the built-in joystick, the user can define his own movement paths and collision detection and save portions of code with ease.

Nintendo is a company well known for its legal muscle, and although huge in the US and Japan has as yet made little impression here. But its UK distributor, Serif, has already adopted a tough line on the development in warning that the full might of Nintendo will come down on all notified copyright infringers.

The pirating system will undoubtedly be given top priority as pirated games will also run on the as yet unreleased 16-bit Nintendo machine due out in Japan in July 1990.

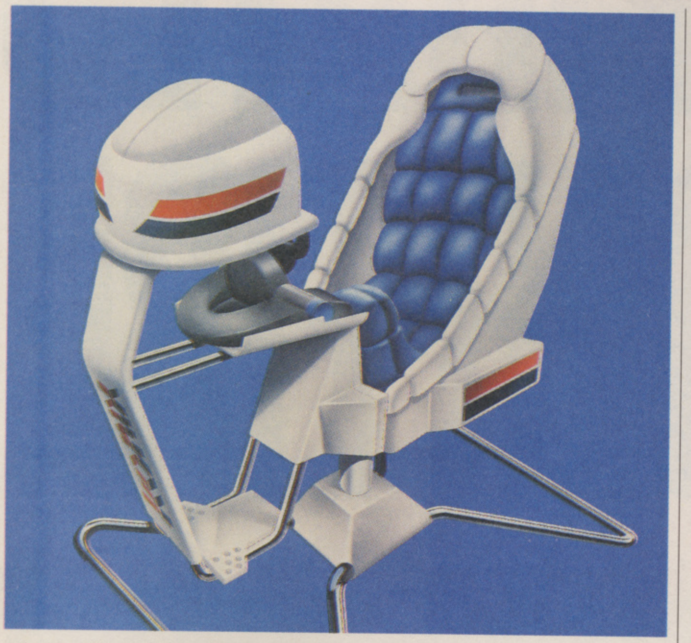
• Innocent fun with a Nintedo machine – but are the games legal?

• Zenith's tiny MinisPort could help set a new standard of miniature two-inch disks

## Two by two's the way forward

The new Zenith MinisPort PC portable could herald the next step in miniaturisation. Zenith has incorporated a two-inch 720K floppy disk drive into the machine even though there's precious little software available on a format that's primarily used by Sony for its video and digital camera ranges.

So at present, MinisPort users will have to rely on file transfer utilities to run applications from the drive. The two-inch disk has an identical read/write format as the 1.44Mb 3.5-inch floppies but despite having a third of the surface area can store half as much data because not all the space on a 3.5-inch disk is used.



• Konix' ambitious Multi-System faces delays

# Problems dog Konix machine

**The futuristic Konix console, to be officially launched at this month's PC Show, could now miss being in the shops for Christmas.**

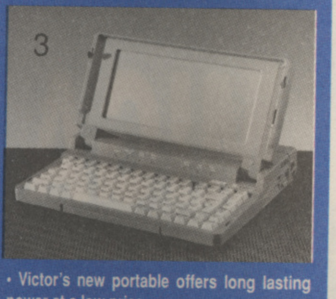
The company has already shelved television advertising plans in the three month run-up and concedes that demand will be greater than supply.

At last week's press preview, Konix were at pains to quell rumours that it was experiencing difficulties. However there are problems with the console's optional seating unit which moves in response to the player's joystick control. Currently, the unit does not have sufficient ground clearance to pass safety standards. It's also incredibly noisy.

Moves are afoot to replace it with a chair that moves on compressed air rather than gearing. Company spokesman Michael Baxter admitted the console was experiencing teething problems but added that 'tens of thousands of Konix's' would be available by Christmas. Journalists present at the preview were not so sure - the console replete with chair etc crashed early on in the proceedings.

## Portable weighs in at under a ton

Victor UK ( 0494 461600) has announced the launch of a new low-cost battery powered portable - the Victor V86P. The new portable, based on a 10MHz 80C86 processor, offers 640K RAM, Supertwist LCD display and a battery life over over 2.5 hours from a two-hour charge. It's available in twin floppy or 20Mb hard disk versions for £999 and £1499 respectively. The portable market is currently the highest growth sector in computer sales and Victor hopes to capture a significant chunk by accompanying the machine's release with a £1 million ad spend.



• Victor's new portable offers long lasting power at a low price

## YOU'VE GOT TO HAND IT TO 'EM

Handy Scanner
Handy Scanner
cameron

Cameron U.K. (01-499 9192) is to release the world's first hand-held colour scanner for PCs and Amigas at the PC Show. Able to process images in 4,096 colours, the Type 6C will sell for £575 and comes with optical character recognition and graphics software. The company is also to release a 200DPI mono scanner which it claims will be the cheapest in Europe. Available for PCs, Amigas and STs, the Type 2 will retail for £199.

# SOFTWARE STEALING BOSSES FACE JAIL

**Company directors can now be jailed for up to two years if they allow illegally copied software to be used or distributed in their companies.**

The new penalty comes in with the adoption in law on August 1st of the Copyright, Designs and Patents Act. To warn managers of the risks they incur, Microsoft, Lotus and Ashton Tate have joined forces to promote a major ad campaign in national newspapers. The point to be stressed is that copyrights for software packages operate just the same way as for an industrial design or book.

The big business software companies can only guess at how much money they are losing on account of piracy. The last available figures were released as long ago as 1985 – then the sum was reckoned to be around £150m. 'We're trying to research the figure at the moment', said Isabel Oswell of Lotus, 'but what we do know is that the rise in software sales is much less than the rise in hardware sales'. It is common knowledge that many companies have far more copies of the standards such as Lotus *1 2 3*, *dBase* and so on, than their license allows for.

The main culprits, it seems, are not the northern European countries but south Europe and the Third World. Successful anti-piracy campaigns have already been launched in Brazil, Israel and Italy, where the prosecution of two companies in April this year led to much increased software sales.

Ms Oswell was keen to stress that initially the campaign will be one of awareness. 'Over here, a lot of piracy is due to ignorance rather than people trying to do us out of money', she said.

Bob Hay of the Federation Against Software Theft, also stressed this lack of awareness among company bosses and went on to warn that companies should be wary of mail order catalogues offering top-notch business software at rock-bottom prices. 'Individuals are being mailshot lists of business software by companies based in the Middle East, Kuala Lumpur and Thailand'.

Lotus and Microsoft products are available for as little as 25% of their retail price.

Hay concluded, 'Directors must realise they are responsible for the compliance with licenses under which their company uses software'. ■

## Spreadsheets, Lotus and videotape

Want to get so much out of your spreadsheet that you'll never view it simply as a means of shunting figures around a screen again?

The latest 'Computers in Business' training video, 'Spreadsheets 2', co-produced by the *Sunday Times* attempts to do just that. The software featured is Lotus 1 2 3 and the video provides an explanation and demo of key aspects and three-dimensional modelling.

Also available in the series are videos on word processing, networks, DTP and choosing a micro. All are available for £49.95 from Kinnear on 01 499 8650. ■

## Mini Office on sale — but bugs strike

**After many months delay Database Software's *Mini Office Professional Plus* finally went on sale - riddled with bugs.**

The *Plus* version was supposed to correct bugs and inconsistencies to be found in the 50,000-selling original but succeeded in only exacerbating the problems. Database blamed the problems on a commercial compiler being used which was itself badly bugged.

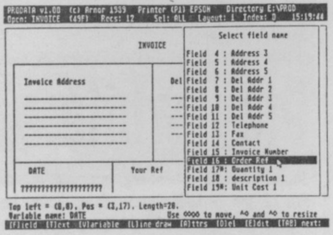
A finished version appeared that would only work on PCWs with double-density drives but then within days of release it was found to be incapable of importing data . Database has put a brave face on the matter after stating it to be the biggest disaster in the history of the company and sacking a number of personnel in the process.

A new, new version is now about to be released in which spell checking has been speeded up and both checker and thesaurus can be called up from within the word processor.

The seven-module package will sell for under £50 and, not surprisingly, all *Plus* purchasers to date will receive a free upgrade. ■

## Protext-type database from Arnor

Users of the acclaimed *Protext* word processor will be pleased to know that its producer, Arnor, is about to release a database management program, *Prodata*. As with *Protext*, data files will not only be compatible across a range of machines - PC , ST and Amiga - but completely portable - you can take a PC disk and the ST will read the file into its version's database. *Prodata* is being released at a special introductory price of £55 until the end of November when it will be bumped up to £80. For this you will get a menu-driven database featuring flexible layout design, variable field lengths, indexed files, filtering and international compatibility. More info on 0733 68909. ■



```
PRODATA v1.00  (c) Arnor 1989   Printer (P1) EPSON    Directory E:\PROD
Open: INVOICE  (49F)   Recs: 12     Sel: ALL  Layout: 1  Index: 0    15:19:44
                                    Select field name
                     INVOICE
                                 Field  4 : Address 3
                                 Field  5 : Address 4
                                 Field  6 : Address 5
  Invoice Address            Del Field  7 : Del Addr 1
                                 Field  8 : Del Addr 2
  -----------------------    --- Field  9 : Del Addr 3
  -----------------------    --- Field 10 : Del Addr 4
  -----------------------    --- Field 11 : Del Addr 5
  -----------------------    --- Field 12 : Telephone
  -----------------------    --- Field 13 : Fax
  -----------------------        Field 14 : Contact
                                 Field 15 : Invoice Number
                                 Field 16 : Order Ref
  DATE              Your Ref     Field 17*: Quantity 1
                                 Field 18 : description 1
 ????????????????????            Field 19*: Unit Cost 1
Top left = (8,8). Pos = (2,17). Length=20.
Variable name: DATE                   Use 0000 to move, ^0 and ^0 to resize
[F]ield  [T]ext  [V]ariable  [L]ine draw  [A]ttrs  [D]el  [E]dit  [TAB] next:
```

• *Prodata*: offres between-machine compatiblity from the makers of *Protext*

## Any old viruses

Ian Hirst, one of the authors of Virus Bulletin, wants your PC viruses in order to keep up to date with all PC types and strains.

He's also setting up a virus surgery – he'll cure any boot viruses for £5 and parasitic ones for a tenner. Ian can be contacted on 0844 290396. ■

## Not so wise!

**Norma Skidmore of Computerwize in Birmingham wishes people could spell a bit better. For months magazines have been confusing her with Computerwise, a totally different company in Brighton, and printed ads with a mixture of the two logos and addresses.** ■

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## COMMENT

### Taxing question

The arrival of 'snoopercomputers' such as those used by the Inland Revenue is another worrying example of our privacy falling prey to machines. The new computer can cross-reference on incredibly large amounts of apparently diverse data: that computer you sell through the pages of *Express* could in theory be noted, the details stored, and one day brought out in court to show that you did not declare all your incomings and outgoings that year.

The claim that 'only the guilty have anything to fear' does not ring true when a computer is so powerful that it can store virtually every transaction you've made in your life. If you won a fiver in the club raffle, would you declare it on your tax form? Now the time is approaching where the tax computer will know all about it. Besides, the linking together of the most innocuous information can be made to prove just about anything.

And yet, on the other hand, we are told that if we ourselves try to store too much information on our own micros – the telephone numbers of our club members on that simple card index database, for example – we may fall foul of the Data Protection Act, which also comes under the microscope in this week's issue.

Big Brother is watching you. And he's got one hell of a machine to keep tabs on you with.

### Copy catalogue

It can be no surprise that those now being targeted for an 'awareness campaign' on copyright are not the playground pirates but those stealing software at work. Lotus, Ashton-Tate and Microsoft are surely being diplomatic when they say most copying is done out of ignorance, not with intent to rob them; one of the reasons given for buying a PC is often 'so I can copy all my mate's software from where they work'.

A similar 'awareness campaign' in Italy – where two companies were made aware of their misdeeds by prosecution – proved successful: business software sales rocketed after the case, which received heavy press coverage. Let's hope court action is not needed in the UK; it would do no one's image any good.

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● Inland Revenue's new mainframe is watching you

# COMPUTER SYSTEM COULD SLASH TAXES

**If all the undeclared tax in the UK could be collected The Inland Revenue reckon the extra income could cut your tax bill from 25p to 15p in the pound.**

To this end it has installed a sophisticated new £2m super-computer to help crack down on tax evasion and earn up to £4,000,000,000 a year for the tax man.

The Camms system is a 10-Gigabyte relational database able to hold up to 100 million files and will enable tax officers to make associations between apparently unrelated financial transactions and track the movement of money in whatever form it comes.

Its storage capacity is big enough to hold a couple of files on every individual of taxable age. At present 70% of information on tax evasion comes from anonymous tip-offs and is held on paper-based files. Entered directly into a relational database, the leads will be processed more efficiently and with greater effect. Camms has inbuilt software to automatically print out writs - in suitably heavy duty fonts that appear old-fashioned and hand-written.

Philips has supplied the hardware which runs database software developed by US company Informix. More Camms will be up and running by 1994. Concern has already been voiced by the National Council for Civil Liberties over its introduction because the Inland Revenue disclosed it had been entering information gleaned from advertisements for property, expensive cars and yachts as well as from tip-offs.

Ironically, the system is configured to comply with the current standard in the drive towards more open systems - the Government Open System Interconnect Profile. Otherwise known as GOSIP! ■

## 25-atom thick chip promises amazing speed

AT&T's laboratories in the States have developed a microscopic parallel processor that looks like having far-reaching effects for future generations of computers.

The transistors are made of gallium-indium-arsenide and measure just 25 atoms thick. Unlike normal transistors, the AT &T device is capable of multiple states - its output current peaks, falls off and then peaks again. This allows it to do the work of many conventional transistors. Aside from its unbelievable size, the transistor operates at speeds of up to 24 GigaHertz - twice the speed of the fastest silicon transistors. Although still in a prototype stage, AT & T's little baby already faces competition - Texas Instruments recently announced a similar development and predicted commercial application in five to 10 years time.■

## More multi-user games on Microlink

**Two new multi-user games will be available this autumn to subscribers to the comms system Microlink.**

*Federation II* has more than 900 locations and is described as 'a cross between Monopoly and Star Trek'. The other adventure, *Bloodstone*, is capable of supporting 'millions' of characters, says Microlink. It combines 'loving, killing, buying and selling' in a scenario which updates the classic *Shades* game.

The resets which marred Shades have been removed from both the new games.

Microlink is on 0625 878888.■

## PCs to speak out

**AMT on 01 450 3222 has announced the release of a new Speech Development System for PCs.**

Designed to form the basis of applications ranging from warning systems to word processors for the blind and partially sighted, SDS comes on a half-sized add-on card with sound output through AMT's external playback unit which plugs into a parallel printer port.

SDS is ingenious and something of a breakthrough in that its software compresses recorded sound to a mere 1% of the memory used by normal digital recording. As such, AMT claim a normal 360K disk can hold up to 24 minutes of clearly spoken guidance, instructions and prompts.

Software drivers allow SDS speech files to be imported to any programming environment. At last it seems your system might get round to talking back to you - but it'll probably make you speechless. SDS costs £3000.■

## Amstrad fax here

**After the recent relaunch of the PC200 Amstrad is set to launch 'an important new businesses communications product' – the now almost legendary fax machine.**

This is understood to be a phone–fax–copier which will retail for £399. The fax will interface to the computer to allow paperless transmission and reception.■

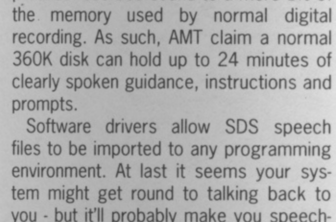
## Atari rumours dept.
## No. 435

**Latest gossip in the Atari camp is that the recent launches of the STE and TT are just to fill time. Atari is really after the low-cost workstation market in a big way and is currently working on a 68040 RISC-based machine in its Sunny Vale R&D labs. Or is it SPARC based? But there again....■**

## Play while you work

**Sound supremo Steinberg, producer of the *Pro 12* and *24* MIDI sequencer packages has announced its M-ROS operating system for use with STs, Macs, and PCs.**

**M-ROS will allow networking between computers running MIDI software so that application can be run in sync. Interestingly, all Atari software will be able to reside simultaneously in RAM with M-ROS as a supplementary operating system. For M-ROS does not replace GEM entirely - just its resident MIDI operations. As Steinberg puts its,'there's little point re-inventing the wheel just because we've found a better way of steering the car'. The multi-tasking capability effectively means that you can edit scores while they're still playing. More information on 099 389 8484■**



**• Steinberg's previous hit, the *Pro-12***

# A portable Mac on your lap

**Having just cut the price of its Plus and SE ranges by 27%, Apple is set to make further pushes into the personal computer market by launching a new portable.**

The Laguna is a 16MHz 68000 based Mac-compatible machine with a 1000 x 1000 pixel screen and lead-acid battery supply. You'll have to dig deep into your pockets though - it's expected to sell for around £4000.

This comes after US company Wallaby Systems' launch of a Mac-compatible laptop last month which features an infra-red keyboard and comes in at a more realistic £1900.■

# Standard floppy could hold 2.8Mb

Micro Solutions, on 010 1 815 756 3411, has announced a 3.5-inch floppy disc drive that can store 2.8Mb on a standard 3.5" disk. It works via a new controller, the CompatiCard IV, which doubles recording frequency - it can thus write to 36 tracks per sector instead of the usual 18 or 9 used in 1.44M or 720K floppies.

The XT and AT compatible card supports up to four disk drives and will sell for around £200.■

# First colour portable from Hitachi

**Hitachi will be entering the portable PC market with the launch of a range of computers later this month.**

Prominent among the new arrivals will be the world's first colour portable the HL400C which comes with an eight-colour LCD screen. No price has been mentioned as yet but expect it to come in for under £700. Toshiba is hot on Hitachi's tail though - it has a 16 colour machine due for release later this year.■

# POLL TAX PROBLEMS FOR COUNCIL DATA

**The Data Protection Registrar is this week writing to over 300 local authorities about the information they got in connection with the Poll Tax, telling many of them to erase some of the more sensitive information from their computers – or face prosecution.**

Under the Data Protection Act, it is illegal to store information on computer that is unnecessary or irrelevant, and many local authorities asked on the poll tax forms for things such as telephone number or relationship with other people in the household – information that is irrelevant to the poll tax.

However, it's not going to stop the poll tax going ahead. 'This is only a preliminary letter to the Community Charge Register Officers,' said the Data Protection Registry's legal adviser Rosemary Jay, 'and we're giving them a chance to put things right.' Any irrelevant information will have to be erased from their computers, but authorities can continue to collect and process other information.■

**• At this year's PC Show, copies of the Data Protection Guidelines will be available free on the Data Protection Registrar's stand - meanwhile for details of the Act and how it affects the home user, turn to the *Express* feature on page 8 and 9.**

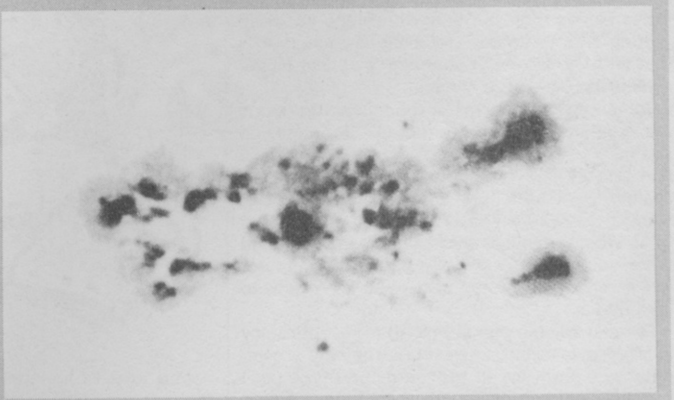
# 'Rays from outer space crashed my micro'

Next time your Amiga hangs up, swear to the heavens. Scientists are blaming the sun for for a massive crash on Toronto Stock Exchange computers last month which halted all trading for three hours.

The Toronto network was previously thought to be totally fault-tolerant but it seems increased solar electromagnetic disturbance is to blame. Canadian scientists noted that the sun was experiencing a 'proton event' which was resulting in a 10 per cent increase in high-energy radiation being beamed our way.

Protons are suspected of disrupting the charge on microchips and causing regular random crashes on computer systems throughout the world.

The little devils.■



• Sun spots: blamed for crashes in Canada

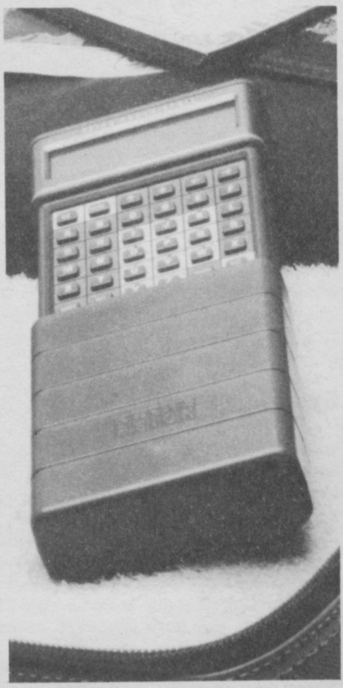
# BIG BLUE THINKS SMALL

IBM is secretly working on a 386 laptop destined to take on the likes of Compaq and Toshiba. The as yet unnamed 386 will feature a paper-white VGA display, 40Mb hard disk and will sell for around £3,500. The new machine has been under development since late last year when production of the ill-fated PC convertible ended.■

# Psion profits rocket as competition looms

**With its Organiser firmly established as *the* electronic Filofax it's no surprise to learn Psion's profits for the first half of 1989 are up by 58% to £1.63 m.**

Doubtless the launch of its new range of A4 laptops will make further contributions to the kitty, but competition in the A4 market is hotting up. Poquet are launching a new mini-PC next week and Atari's Folio is already in the shops. Perhaps Psion will retain the edge though since its range of hand-helds will use EEPROMs as memory storage devices and are claimed to be able to run for several months without battery recharges.■



• Psion's Organiser: leading the company to a 58% profit boom

## SNIPPETS ● SNIPPETS ● SNIPPETS ● SNIP

Amiga buffs wanting the latest in demos should check out Goldstripe PD PO Box 557 Glasgow G11 5NA

Would you believe that the copy holder market is worth a cool £13 million and is expanding at a rate of 25% per year?

A Parisian computer recently went hay-wire, sending 41,000 motorists official letters informing them they'd been charged with offences ranging from manslaughter to keeping a brothel. Marriages wavered for four days before aplogies were issued

US company, Bellcore has developed a smart card which recognises human speech. You'll have to train it to understand you at first though. The smart is designed for use as fraud-proof bank card

# SPREADING THE WORD

*Rod Lawton flings his typewriter into the bin and sees what a word processor can do...*

The most common serious application for computers in the home is word processing - but what has a computer got that a typewriter hasn't?

Well for a start, typewriters have several nasty characteristics. There's that regular "ping" every time they reach the end of a line. And then there's the continual clackety-clack of the keys. Plus the endless hours spent Tip-Exing out mistakes. And the retyping of countless successive drafts each time you make a change to your copy... the list goes on.

A word processor will solve all those ills, and more besides. You can buy word processing programs for just about any computer, and just about any word processing program will make your old typewriter seem as efficient as chipping away at stone tablets.

## Home from home

Experienced typewriter users will be immediately at home with a computer keyboard. The keys follow the usual QWERTY pattern, and number and punctuation keys can be found in all the usual places too. The only difference between writing on a computer and using a typewriter is that with the computer your words appear on the screen, not on a piece of paper.

Computers do improve on the typewriter in one immediately obvious way though. No longer do you have to listen for a "ping" at the end of each line and reach for the carriage return lever. Your computer will start new lines automatically, carrying over whole words rather than splitting them when it realises they're too long to fit. And when you reach the end of a page, the computer will go straight onto the next - you don't have to lift a finger.

The real key (no pun intended) to the efficiency of word processing, however, is the way a computer will store up all the words you type until you are ready to print them out on the machine's printer. This lets you go back over what you've written, checking spelling, punctuation, grammar etc as many times as you like before you finally commit your words to paper.

## Editing highlights

Word processing programs will let you store documents of essentially unlimited length either in the computer's memory or on floppy disk. You can recall any document at any time and go back over what you've written, correcting it, changing it and then saving it again or printing it out.

All word processing programs offer a "cut & paste" facility. Text can be cut in single words, sentences or large chunks. Lines, paragraphs and even whole pages can be picked up and inserted somewhere else. You can edit and refine what you've written at will without having to re-type a single word, and the text will reflow automatically for completely invisible repairs.

## Spelling it out

Many word processors will even check your spelling. They go through your finished document, checking all the words against those in their own built-in dictionaries. Every time the spellchecker comes across a word it doesn't recognise it will offer you the option of ignoring it, changing the spelling, or saving it to the dictionary as a new word. Most spell checking programs can be made to come up with the nearest spelling they have for any dubious word you come across.

## You pays yer money

As with most things, the more you pay, the more you get. Word processors for the cheaper, less sophisticated computers tend to be cheaper and less sophisticated themselves. Spellcheckers are becoming standard issue now, but other exotic features remain the province of the more expensive machines and programs.

Some word processors have a "mail merge" facility whereby a letter can be drafted with "holes" left for the name of the addressee - a technique used to such good (?) effect by mail order companies. In this way you can use just one letter document get the computer to print it out hundreds or even thousands of times with a different name and address (taken from a separate list either on disk or in the machine's memory) each time.

As well as spellcheckers, some word processing programs also offer a thesaurus - useful for writers who have trouble finding *le mot juste*, or, more likely, for *Sun* reporters trying to achieve additionally appallingly alliterative anecdotes.

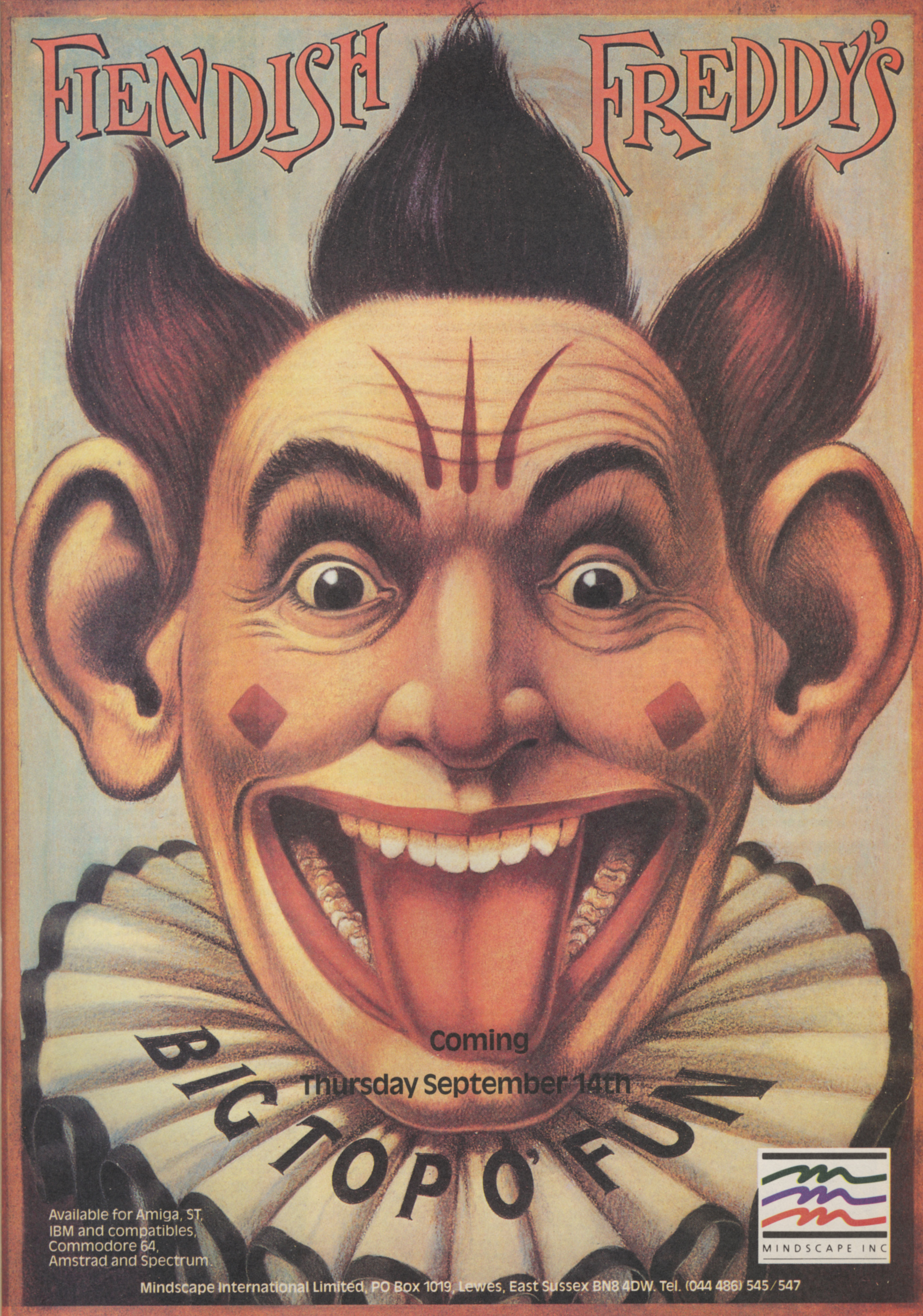
Word processors for the Atari ST, PC-compatibles and Commodore Amiga often incorporate the ability to handle pictures in the text. The pictures can be "imported" electronically from a drawing or art program, and laid out among the words by more ambitious home publishers. And many more expensive programs will let you lay out your text in columns for an even more professional-looking result.

On the whole though, these additional features are a luxury. Even cheap word processing software will let you lay out a business letter, article or book manuscript competently. And until you've become familiar with what word processors can do, and what your own needs are, you're better off with a simple, budget program.●

## PROGRAM LISTINGS

Word processing programs are available for just about every machine on the market. The following are generally reckoned to be the best for each machine.

- **Sinclair Spectrum**: *Tasword* • £13.90 - £24.95, depending on machine • Tasman Software (0532 438301). The Spectrum is not renowned as a machine for word processing on, but Tasword is versatile and well-featured, if a little slow in operation.
- **Commodore 64:** *Paperclip* • approx £50 • available from mail order companies (as advertised in *Express*). *Paperclip* is getting hard to find these days, but is an excellent product.
- **Amstrad CPC:** *Protext* • £19.95 - £39.95 depending on version • Arnor (0733 68909). Very fast - especially when bought in its most expensive cartridge form - flexible and full of features.
- **Amstrad PCW:** *Locoscript 2* • £25 • Locomotive (0306 740606). The price is academic since if you buy a PCW you get the program free! Incredibly flexible and also easy to learn. Very slow, however, compared to the PCW version of *Protext*.
- **PC-compatibles:** *Tasword* • £50 • Tasman Software (0532 438301). PC programs tend to be incredibly expensive. *Tasword* is an exception. It's also fast and versatile.
- **Atari ST:** *1st Word Plus* • £79.95 • Electric Distribution (0480 496789). Not cheap, but few serious ST programs are. Extremely versatile. Will even print in more than one column and handle pictures created in art programs.
- **Commodore Amiga:** *Kind Words 2* • £49.95 • Amiga Centre Scotland (031-557 4242). A kind price, too. Lacks sophisticated layouts but more than adequate for everyday word processing.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# ARE YOU IN ON

*The ins and outs of the Data Protection Act leave lawyers confused. Sharon Bradley sorts out the mess*

The Data Protection Act was enacted by Parliament in 1984. Westminster's reason for bringing it in was, they said, to give new rights to everyone about whom information may be stored – somewhere, anywhere – on a computer. The Act compels any data user storing computerised information about living people to register the fact, supposedly reducing the risk of unauthorised access.

Section 21, the spearhead of the Act as far as the man or woman in the street is concerned, allows us access to data held on us.

### Jeux sans frontières

Cynics claimed, however, that personal security was the last thing the Home Office was worried about. They had learnt that the Act was needed to ratify the Council of Europe Convention on Data Protection; failure to comply with their EC counterparts, who had already introduced equivalent measures, might have resulted in the Europe refusing to transfer data over here, damaging our international commercial trade.

They may have been right. One of the Act's principal weaknesses is that the person or organisation handling the data can do almost anything they like, provided they declare exactly what they intend to do with it.

A company that keeps a computerised databank of customers' names and addresses, for example, is perfectly entitled to sell that list to mail order companies – provided that they state this during registration.

The Electoral Roll is a case in point. Although the information held is registered under the Data Protection Act, anyone can wander along to their local council and take a look at it. The Electoral Registration Officer will even sell extracts from his Electoral Roll databanks to direct mail companies and credit reference companies for a fee of £2 per thousand names. Why bother to register under the Act at all?

**• Wilmslow-based Senior Assistant Registrar, Dr John Woulds. The Data Protection policy department at Springfield House provide advice and guidance to anyone who needs it**

### Confidence trick

Says Dr John Woulds, Senior Assistant Data Registrar at Wilmslow in Cheshire: 'The Electoral Registration Officers are obliged to make public some of the personal information collated. But the records also hold additional private information like the eligibility for jury service. This is not for public perusal; consequently most of the Electoral Officers choose to register the whole lot under the Act.'

Although it is not for sale, the same is true of the poll tax register; only surnames, initials and addresses are made public.

The Act is riddled with the kind of loopholes that make it a shining example of British bureaucracy at its best. Expressions of opinion about the individual on whom data is held, for example, fall into the category of 'personal data'. But an indication of the data user's intention towards that individual doesn't.

Now this can be quite a difficult distinction to make and one that is subject to shifting sands of personal interpretation. Dr Woulds freely admits as much. 'The main reason why expressions of intention were excluded from the Act,' he says, 'is because organisations in the personnel management sector preferred to exclude information concerning personnel succession. You can say someone's suitable for a promotion – that's an opinion – but to say he or she is actually going to get it is a declaration of intention and one that you might not want the person in question to see.'

### Hush money

Again, cynics believe that Section 21 is a right that only the comfortably well-off will be able to exercise. Instead of leaving the Data Protection Registrar, Eric Howe, the right to charge a nominal fee of, say, £1 every time an enquiry is made under the Act – a fee far more in keeping with the supposed spirit of the Act – Home Secretary Douglas Hurd imposed a much larger access fee of £10.

As Norman Truscott, from the Automobile Association's headquarters in Basingstoke reports: 'We have the details of six million members stored on our computer; since we've been registered under the Act, we've only had four formal requests for data subject access'. The AA, however, like the Readers' Digest, do not sell their customer lists to anyone.

Similarly, the cost of registering under the Act is £56 for three years - a lot for the small computer user.

## HOW FAR CAN YOU GO?

If you are holding personal data that's stored in 'an automatically processable form' – on a computer that is – and that relates to living, identifiable individuals you must register under the Act. Your database of long-defunct Roman Emperors won't need to be registered.

Let's say that you're a modern literature bookseller; you might keep on your computer a list of all the books you have in stock, who wrote them, their date of publication, ISBN number and so on. This is classed as personal data because it concerns living, identifiable authors.

Watch out for the red herrings, though. The fact that you are holding information on such people could well be immaterial as far as the reasons you're keeping it are concerned. If you're merely monitoring your stock flow, then it has absolutely nothing to do with the authors themselves, so there's no need to register.

If on the other hand, you're using the database to compile information on the authors themselves – you might be putting together a personal profile on each writer – then you're processing that information with reference to those people and should register.

Don't register if you're using your personal computer for keeping track of personal or family household accounts. A small recreational club, on the other hand, must ask each and every member if they mind having their details stored on computer. If anyone does object, then you must register under the Act and tell them exactly who might have access to the information in the future.

So how do you go about finding out who holds data on you and what they know?

Until March of this year, you could go along to a reference library and consult the Data Protection Register. This consisted of a microfiched list of all organisations registered under the Act, along with a breakdown of the kind of data they held, whether the data subjects concerned were employees or club members, why the information was being held and who would be likely to see it.

These no longer exist, the only copy for public perusal now being located in Wilmslow. All you can do now is write to the organisation which you suspect of holding information on you, stating that under Section 21 of the Data Protection Act you would like to exercise your right of data subject access. They will send you a form that you will have to fill in and charge you the requisite £10 fee. Government wheels grind slowly though; it may take weeks or months.

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1
DATA
PROTECTION
ACT 1984
Introduction to
the Act

# N THE ACT?

'Yes,' agrees Dr Woulds, 'I accept that it is expensive for the small club or society.'

Perhaps because the Data Protection Act is still young, there have not been many prosecutions. The most common cause for the Registrar having to take enforcement action against an organisation is complete failure to register data. Consider yourself warned though: being genuinely ignorant of the need to register won't save you from a fine that can be anything up to £2,000.

If you're in any doubt at all about the Act, phone 0625 535777 and ask for the series of eight blue guideline pamphlets and a leaflet entitled 'Are you in on the Data Protection Act?' They should help you penetrate at least some of the ambiguity surrounding it.●

Guideline 7
DATA PROTECTION ACT 1984
Enforcement and Appeals
February 1989
NOW YOU HAVE THE RIGHT TO KNOW WHAT COMPUTERS ARE SAYING ABOUT YOU

## EXEMPLARY CONDUCT

The Data Protection Act applies equally to small clubs and large organisations:

**Q: In my spare time, I am Membership Secretary to the Plunkett-Green Yachting Club. On my computer I store the membership details of the 20 or so people who belong to the Club. Do I need to register?**

**A:** If none of the members of the Society object to you holding such information, and you take certain precautions as to who sees it, then you don't have to register.

**Q: What if one member of the 20 does object?**

**A:** You can either store the details of the 19 members who don't object on the database and still not register, or proceed with a computerised membership for everybody – including the member who does object – and register under the Act.

**Q: What happens if somebody comes to me asking for the address of someone whom they suspect is included on my database?**

**A:** If you registered that you were keeping the records exclusively for club business, giving an address would be a breach of the law.

**Q: What sort of information can't I keep on my computer?**

**A:** The information has to be 'relevant and not excessive' for the purpose for which you're keeping it. In the case of the Yachting Club, you won't need to know if the skipper of the *Cullendar Springs* has a police record or what state his current bank account is in.

**Q: I run a small club and keep a mailing list of members on my micro. Do I have to register?**

**A:** Again, you don't need to register provided none of your customers object.

C&C Computers and Communications

ATTENTION

NEC PC ENGINE ANNOUNCEMENT.

NEC Corporation, NEC Home Electronics Ltd, and NEC (UK) Ltd (collectively 'NEC' hereinafter) have recently become aware that the PC ENGINE is being offered for sale in the United Kingdom. NEC believe that it is important that UK consumers should be aware of the following information.

1. The PC ENGINE is a product manufactured by NEC Home Electronics Ltd for use with the NTSC transmission system. It is not compatible with the UK PAL transmission system nor any other non NTSC transmission system. For this reason, NEC Corporation does not market the PC ENGINE in the UK or in any other EEC countries.

2. There are no authorised distributors of the PC ENGINE in the United Kingdom at present.
Therefore, if you are offered a PC ENGINE which is said to be compatible with the PAL system or any transmission system other than NTSC, you should be aware that it will have been modified by a third party.
This modification is made without NEC's permission or approval.

3. In the event that a defect should arise in any modified PC ENGINE you must contact the dealer from whom you purchased the product. NEC cannot be held responsible for any defects in any modified PC ENGINE nor be involved in any disputes between purchasers and sellers of such products. In particular, NEC (UK) Ltd cannot respond to service calls in respect of any modified PC ENGINE.
Please note that the guarantee provided with each PC ENGINE sold in Japan by NEC Home Electronics Ltd extends only to the use of the unmodified PC ENGINE in Japan and therefore NEC cannot assist you if you purchase a modified PC ENGINE in the UK. Any other guarantee provided with a PC ENGINE in the UK is not an NEC guarantee. Finally, any modified PC ENGINE's sent to NEC (UK) Ltd for servicing will be returned to the sender.

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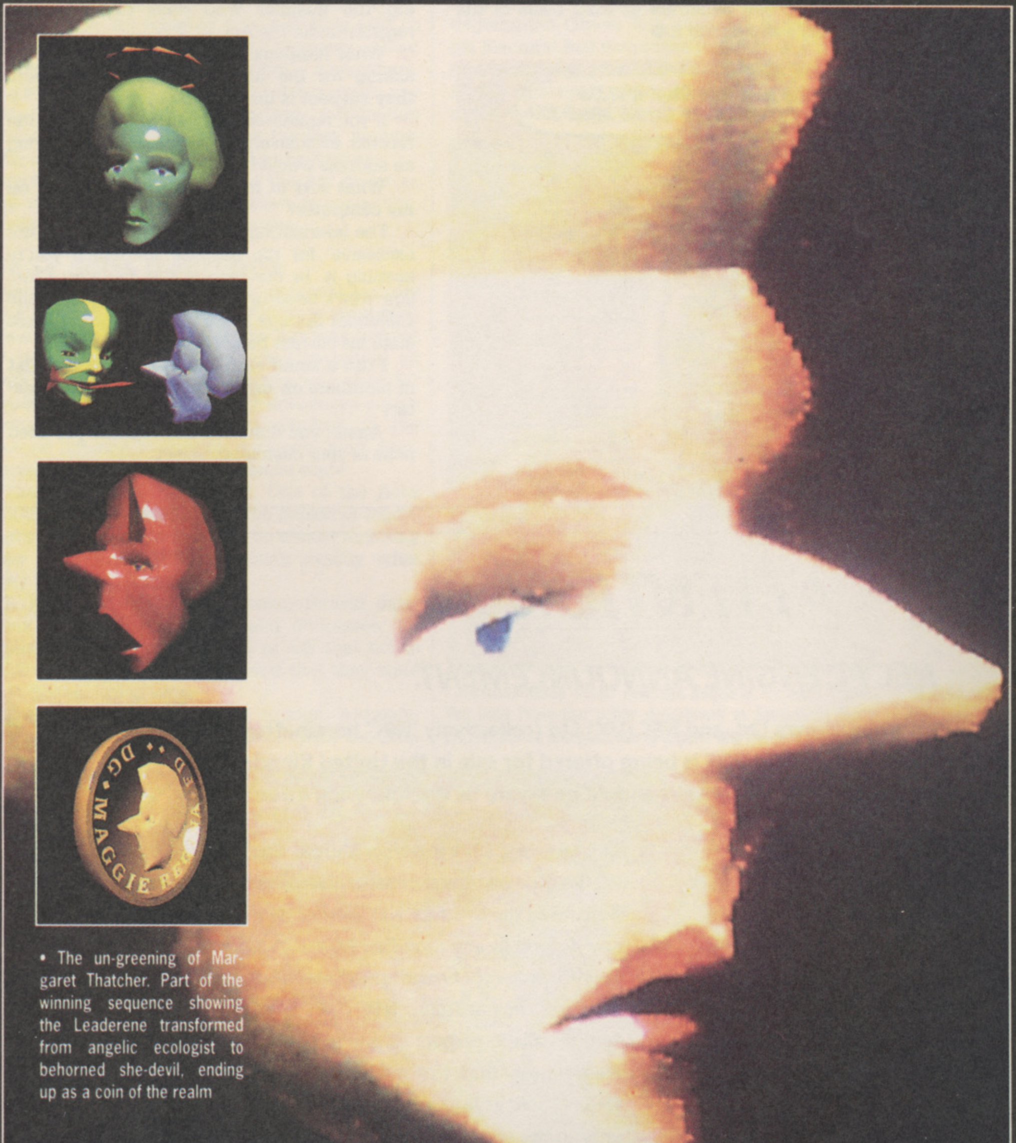
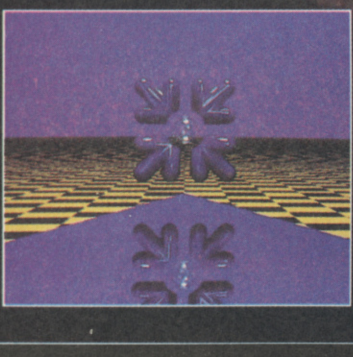
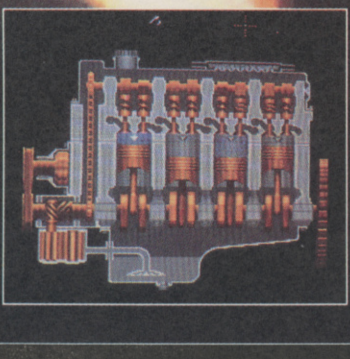
# THE ART OF PO

*Damien Noonan at the Edinburgh Festival finds computer users north of the border mixing politics and animation*



• The un-greening of Margaret Thatcher. Part of the winning sequence showing the Leaderene transformed from angelic ecologist to behorned she-devil, ending up as a coin of the realm





(Far left) • The bouncing bank: Dileep Sharmar was placed third with this animated advertisement

(Left) • John Armstrong's fourth-placed engine animation

It is the first day of September, the famous international arts festival in Edinburgh is reaching it's grand finale. Up at the castle the military pomp and circumstance of the tattoo is in full swing; down in the streets, the young and occasionally talented are entertaining each other, vying to be recognised as this year's rising star. Meanwhile in a back lane behind a tall row of grey stone houses a new artform is enjoying it's own role in the festival: the art of computer animation as practiced on the Commodore Amiga.

This is the second year in which Martin Lowe of the Amiga Centre Scotland has tried to bring hi-tech art to the attention of the festival-going public. For three weeks his shop is transformed into an exhibition room, as many Amigas as he can lay his hands on ranged around the walls. The most famous and impressive animations on the Amiga scene - Walker demo, ray-traced Newton's cradle and Angle-poise lamps that live - run all day, entertaining curious visitors. There are even workshops to give complete movies a basic grounding in the use of an animated paint package: and all provided free of charge by the staff.

Climax of the whole event is the judging of prize winners in the Amiga Centre's annual animation competition. Entrants include many professionals, but even more amateurs who spend hours over complex ray-tracings in their own time at homes. Entries, on floppy disk or videotape, vary from short simple sequences to entire video productions, compiled from many sections created with many different paint packages and edited with professional video gear.

The quality, however, varied less than the subject matter: most of the entries were extremely cohesive and well presented, while their concerns included some sex, lots of violence, and a little bit of politics.

## Suicide and incest

Shock-effect tactics made the video-tape entry from American demo programers Process one of the least forgettable entries. A series of quite remarkable animation sequences with a resonant sexual and political overtones built into a bizarre kind of narrative, climax-

# OLITICS

ing with a disturbing but beautifully made sequence in which a baby knocks a hand-gun from a drawer and blows its head off accidentally. Unfortunately this was then capped with controversial live footage from an American newscast in which a businessman is seen committing suicide with a gun in his mouth. A bit strong, very sickening, and quite unnecessary: so despite the quality of the animation, Process came away without a prize.

Another powerful and memorable entry was a good deal more subtle. This video-tape entry, from Amsterdam-based animator Greg Lawson, was commissioned by the Dutch government as part of an educational film about incest. "Incest" was very reminiscent of Raymond Brigg's work, treating a serious subject through the beautiful, understated and colourful style of a children's book. The pastel and watercolour-like illustrations were lovely, and the underlying message was subtle: but Greg failed to win a major prize, possibly because his techniques were a shade traditional.

## In reverse order...

So what about the prize winners? Well, many were granted prizes, five received commendations, but the main honours went to the top four. The judges, all experienced in professional broadcast animation and computer graphics, were Jack Garrow of video production outfit Inverdeal Productions, Nick Masters, deputy editor of *TV Production International*, and Len Brown, lecturer in computer graphics at Middlesex Polytechnic. They chose the following four winners, in the traditional reverse order....

In fourth place came "Engine" by John Armstrong. This was a technical-drawing style cut away of a car engine, demonstrating the inner workings of internal combustion. As the pistons moved up and down the chambers, the valves opened and closed to show the intake-compression-combustion-exhaust cycle, and the crank drove the cam-shaft and so the cam and the valves. The animation was smooth, clean and elegantly drawn on an expanded 1Mb A500 with *DPaint III*.

Third prize winner was Dileep Sharmar, with a combined effort involving another engine illustration, not shown on the day of judging, and a *SA3D* animation of the Royal Bank of Scotland logo, flying into and out of the screen above a mirrored and chequered landscape. Smooth, fast and impressive.

Second prize was a surprise choice but a popular one, awarded to nine year old Jonathan Grant for his endearing collection of animated mouse pointers. Smartly presented, each with an icon to start, and amusing, they changed from a 'smiley' face that grinned and grimaced to a whizzing clock, to a small chap pedalling furiously away on a bicycle. Good clean fun.

And finally, the great honour of first place, ladies and gentlemen, went to Mark Wirt, an amateur working at home with a 1Mb A500 and second drive. "Maggie goes Green" was very like Ben Elton in its content: a little bit of politics, a small amount of humour, and bags of animation.

It shows the Iron Lady herself, snapping up the green vote, until confronted by the spirit of green disarmament: at which point she turns into a horned devil and spits fire in the face of her foe. The sequence concludes with her face appearing instead of the Queen's on a pound coin (known up here north of the border as the "Brass Maggie"). A combination of political comment and humour, but above all, beautifully executed. The frames of animation, rendered with *SA3D* and *Digipaint 3*, numbered a full 170. The end result was a worthy winner, even though Mark said beforehand: "I won't be winning this year – although I"ll go down fighting- the subject matter will be popular in Scotland anyway."

All in all, the animation festival was a great success within its current limitations, but deserves better. With more facilities, wider recognition and publicity and a bit of financial support it could become a massive, original and educative part of the Festival arts scene.

As it is, even those who stand to gain most (financially), Commodore themselves, can't be bothered to offer Martin Howe some support. Why not Commodore? Still – after that bit of politics – thank you and goodnight.●

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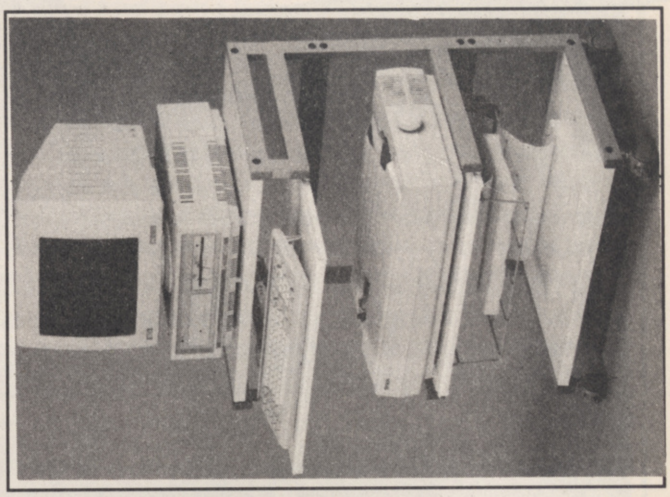

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NCE 2

EXPRESS MAIL

## Dear Reader

**Another collection of comment, controversy, compliments... and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:**

**Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ**

**PS. Sorry, but we just don't have the time to give personal replies, whether you include an sae or not. We're too busy putting Express together!**

### HEAD CASE

Thought you might be interested in this shot of my partner, just after we bought our first computer. The game that requires such intense concentration and protection – he kept crashing hence the crash hat – is the Spectrum version of *Nigel Mansell's Grand Prix*...

*Ms L Wilford, Hinckley, Leics*

**• The biggest Prix: playing Nigel Mansell on the Spectrum**

***• Hmph. Well, it looks a totally staged picture and letter to me, but then I'm just a cynical old journalist.***

### COURSE WORDS

We are writing to you as three undergraduates who are on their sandwich year in industry.

The three of us regularly read your magazine and were angered by the letter written by Mr John R Hudson (*Express* 42). His view of the computer industry was blinkered to say the least. Here are some points that Mr Hudson might like to consider:

1. As students on a degree course in computer science we have studied 15 subjects of which only two had mathematical content. This seems to show that mathematics does not go completely hand in hand with computer science.

2. Maths teachers may be in short supply, but this bears no relation to computing. It is more likely that these people can get jobs in the private sector more readily than arts degree graduates (who often want to teach anyway) so they take them.

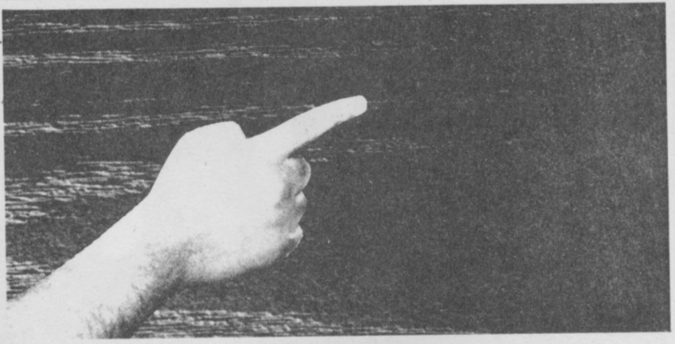
3. Mr Hudson uses a computer to write as a journalist. This means he definitely does not have a career in computing. He gives little credit to the programmers that often have to spend years on one project, keeping track of vast amounts of information and developping intricate code.

An example of Mr Hudson's argument is that if I use a cash card machine at a bank, I then become a merchant banker.

The computer industry does not just turn out technicians, but also highly skilled problem solvers and software programmers. You have to remember that the solvers are software programmers. You have also to remember that the hardware is the frame for any computer system, but only the software in ROM or RAM makes the system useful.

*Chris, Gary and David, Guisborough, Cleveland*

***• I'm not quite sure what we're supposed to be arguing here. All I will say is that to me, mathematics and computing seem vaguely related but not closely so. You won't find many areas as illogical or inconsistent as computing, whereas as everyone knows, mathematics is totally logical consistent, (though you can't prove it mathematically, but that's another story).***



**• There's such a thing as too much miniaturisation, says J Treeby**

### NIPPING IN

I agree small is beautiful, but miniature equipment to a point where it is impossible to repair is not. Not all Japanese products are good. As a person who has repaired music centres and televisions, I discovered the worst potentiometers and variable capacitors are Japanese designed. Also the MSX does not seem to have been successful, I wish it was.

Something I like about our Oriental friends is their circuit diagrams; the British Standards Institute have triggered a right mess of our drawings – everything is rectangular boxes now.

One problem I still have is to identify integrated curcuits with queer numbers, especially those made in Indonesia.

*J Treeby, Plymouth, Devon*

***• The things I like best about our Oriental friends are 1. They insist on going out after work 2. They insist on taking you out to really good night clubs and bars and 3. They insist on paying for all your beers when you do go out. Where this all falls down of course is that 4. Japanese beer is horrible.***

### FEMALE MAIL

Having read several copies of *New Computer Express*, I gather that you are interested in the computer habits of the female gender. As a 28-year-old mother of three, I am not sure whether I qualify as a 'girlie' however, as a Spectrum +2 owner, I enjoy playing many different games. I particularly like adventure and arcade games.

Some of my favourite games are *Atic Atic, Where Time Stood Still, Time & Magik*, all the Freescape ones, *Blasteroids* and *Cybernoid*.

My daughter who is three (definitely qualifies as a 'girlie') plays *Pacmania* and *WEC Le Mans*. My other two children are boys and do not show as much enthusiasm as Stacey does. My next door neighbour has three girls who all enjoy playing computer games. So perhaps in several years we may no longer be such a small minority in a male dominated environment.

*Angie Rogers, Peterborough, Cambs*

***• I hope so. What might a more female-dominated leisure software market come up with in the future? A working mother sim, where you have to bring up a family, hold down a full-time job and look after your slob of a husband – or would the male half of the market find it too challenging and 'unreal'?***

### DIDGERIDICKHEAD

On the subject of poor quality software. I do copy software, but rarely keep any of it for more than about two days. The reason for this is quite simply that 99 percent of the software I receive is absolute rubbish. I mean that. *Forgotten Worlds* for example got fabulous reveiews from

### ANALYTICAL ENGINE

I would like to comment over the love your magazine seems to have for the PC Engine.

I think you are missing the point when making comments like "none of them could handle the graphics and sound" (*Gunhed* review *Express* 43) or "a perfect example of PC superiority over all other home games machines, as witnessed by US Gold's ST/Amiga conversions" (*Sidearms* review issue 43).

It's not the computer's capabilities at fault, but the programmers. I think if US Gold, Ocean etc used the same programers as Nintendo, Sega and PC for their conversions then the results would be brill to say the least.

*Jeff, North Shields, Tyne and Wear*

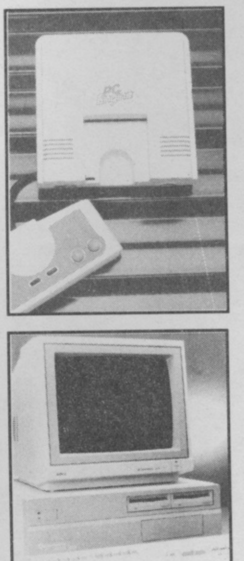
### PILE OF SNOB

There is now emerging a new type of computer snobbery in your illustrious pages. Up to now it's been the usual argument between Spectrum and Commodore 64 owners and the (boring) on going debate between ST and Amiga owners. Now there's the one man crusade by Rik Haynes for the PC Engine is better than any other computer you care to mention.

Well it's bound to be superior in the graphics and sound department that's all it can be used for. No comparison can be drawn between this and other home micros. If you are going to start expanding columns for operation specific machines, how about a 'Your Pocket Calculator' column, or a 'Your Digital Watch' feature.

Why not stick to computers (those with keyboards and the ability to be programmed), since that's what I thought the magazine was about.

*R Dennis, South Yorks*



**• Which of these is better for playing games? Here's a clue: it's the PC Engine.**

### DIFFERENCE ENGINE

As an Amiga owner, I feel it's my duty to absolutely contradict the *Gunhed* review (*Express* 43) I was reading the review for a laugh when I came to the Other Versions bit, and I was horrified! How dare you suggest the Amiga can't handle those mediocre graphics!

*No name given*

***• We've had a bagful of letters from irate Amiga owners like this, all ever so ever so upset that we dared challenge the games capabilities of their beloved machine. Look, just accept it: the PC Engine plays more impressive games than the Amiga, end of story. Sorry if you can't handle it, but that's the way it is.***

nearly all the magazines but it was for too difficult and frustration quickly prevailed.

Indeed, the only games I have kept for the reason that they were in fact good are *Kick Off* and *R-Type*. Consider that I've got about 70 disks and the fact that very few games are actually worth keeping and you will realise what an absolute rip off software is. That is why I am going to purchase a PC Engine as soon as they are widely available.
*Rolf Harris*

***• Ah, Rolf Harris, as in the Monty Python Australian wine – Vieux Rolf Harris, a lot of sparkling confidence but no taste? And, they should have added, that makes you want to throw up?***

### PRELIMINARY DILEMMA

I'm in a dilemma about which console to buy. The PC Engine looks very good, but so does the Sega Megadrive. I've read different reviews on both machines but the information on the Sega is always a bit vague. You said last week that there will be a 16 bit engine out next year; do you think it will be better than the Megadrive? Anyway enough speculation, what I really want to know is, can the Sega Megadrive outperform the PC Engine?
*AL Patterson, Dudley, West Midlands*

***• To be honest there isn't much between them; if anything the PC Engine's better because it's cheaper, but you'd be happy to get either one for Christmas.***

### LYING DOWN

I wonder if you could give me a little advice. I have developed what I believe to be a marketable utility program for the Atari ST. The trouble is, how do I go about selling it? I don't really have the time, money to sell it myself and I have absolutely no idea who to approach. The program, called *Enhancer*, is a fully integrated Amiga emulator which will run 99% of Amiga software on the ST. I am also half way through developing an Atari ST emulator for the Amiga.
*Jez Hanson, Sutton, Surrey*

***• We'd like to hear from anyone else who has done the impossible like this. If you have written an Archie emulator for the ZX81, selected an England team to beat the West Indies, or eaten egg and pate sandwiches and survived, write to If You Believe This You Believe The Water Adverts, New Computer Express, 4 Queen St, Bath BA1 1EJ.***

### HEAVY PET

This week I would like to tell you about a remarkable little machine known to many as the Commodore PET 2001. This incredible and phenomenal masterpiece has touched the hearts of many - in more ways than one. Yes it's true. The CBM PET's main processor is used as a central component in over 90% of British made pacemakers!

The tape deck mounted into the keyboard of the PET was installed in Voyager 2 to record flight data. NASA have also used the compact PET keyboard in several shuttle missions.

Amazing, but true: Dan Silva, author of the incredibly successful *Deluxe Paint* series, originally wrote the program for use with a PET.

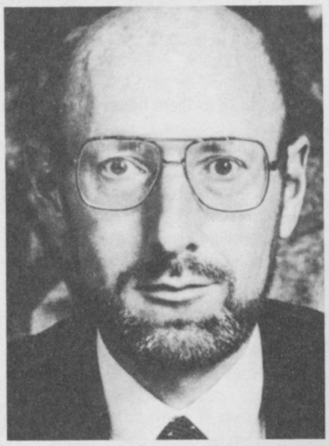
Do you remember when Commodore recently had a PET in a glass case along with several other machines at the Personal Computer Show? The screen was disabled and the computer was wired to control the lighting for the entire building.
*David Carter, Woking Surrey*

***• Not as amazing as the use I saw someone putting an MSX to once. They were using it as a computer.***

### WATCH OUT

Your feature on Japanese technology in *Express* 46 was very interesting, but while you were all too keen to point out all the great Japanese innovations and the fact that Western companies like Amstrad are all keen to copy their ideas, you seem to have forgotten about a certain Englishman and his company, that came up with the digital watch, electronic calculator, pocket TV and the cheap home computer.

Who was copying who then eh?
*Jonathan Tranter, Wolverhampton, S. Staffs*



**• Clive Sinclair invented the digital watch, the pocket TV, the Spectrum and the C5. But he's not all bad**

***• Of course you're quite right, Sinkers was there first. But, as usual, the Japs came along and did everything better and smaller and cheaper.***

***And in having devised the pocket TV and digital watch before anyone else, like the Chinese having invented paper and the Civil Service, Sir Clive very effectively took civilisation several huge leaps backwards.***

### THE PD RIPOFF – PART 972

Firstly I would like to chip into the argument about the price of public domain software. As a PC compatible user, with a 3.5-inch disk drive, I can pay anything between £2 and £7.50 for one disk up to 360K of data on it.

A library in Glasgow called Vasstec charge £2.99 per disk plus £2.00 postage. For this, you get to choose ffrom a quite comprehensive library of generally good software, a good quality disk and clear printed label.

On the other hand, from PDSL in Sussex, I get a choice from a very comprehensive library, a similarly good quality disk and a hand written disk label, stating only volume number and no sign of the contents, for a ridiculous £5.90 inclusive.

On the surface, there may seem little difference, but if you are ordering five disks at a time as I tend to, from Vastec you could get five disks for £16.95 inclusive of postage. From PDSL, five disks would cost you as a non member £29.50. Why? Surely it does not cost £6 to get a 3.5-inch disk, copy an archived file on it, write the appropriate volume number on the label and post it in a plain manila envelope?

Secondly I think that software companies should get off their communal backside and turn their talents to supporting the Acorn A3000 as well as the rest of the Archimedes range. As your articles on the Aleph One Card and RISC technology proved, the Arch is truly a powerful micro computer. Before the software companies stand up and say that they will not support it until it gets a larger user base, think about this: admittedly £800 is a formidable investment to make and I would certainly not invest in a computer that has precious little support, however powerful it may be, but software companies, smugly wallowing in profits from software written for the Atari ST and the Commodore Amiga, have both the power and the caiptal required to change all of this.

From personal experience, I can tell your readers who have no experience of the Arch that the RISC-OS desktop environment is truly a pleasure to do things from the command line or from within BASIC that I never thought possible outside of assembly routines. Even the programs on the RISC-OS Welcome disk are very good. What more can I say?
*Paul Richardson, Sale, Cheshire*

***• Nice to see someone who can be positive about a machine without going inevitably on to say how much better it is than everything else!***

***What more can you say? Well, how about saying how the rest of us can afford to buy an Archie – I'd love to know...***

### NO MORE TOP TENS

Greetings from the sunny island of Malta. I would like to congratulate you on your magazine which keeps all of my computing friends and myself up to date with all the movements and landslides in the world of home computers. Just to show you that the average computer owner➤

### CLUB NEWS

**I am writing to you concerning Mr D Palmer's letter (*Express* 43) and the Guild of Unemployed ST Users.**

**The idea of such a club was based upon the original Spectrum unemployed user group (SUUG) which I began in 1985. I make this point to illustrate two important points.**

**1 A club such as this must be seen to act in a perfectly legitimate way, in order to encourage donations from sources such as retailes and magazines (*NCE*'s offer of a free subscription is a perfect example of this). This honest approach, quite simply produces the best overall results for both the club abd especially the members.**

**2 Creating a successful user group of this kind is hard, but entirely possible. SUUG still exists today, is professionally run and is still probably the only gruop of this kind in the world. (That's Life viewers will appriciate a "Unless you know better" line here).**

**ST owners should not be discouraged by the misleading or dishonest behaviour of one person. If any person is interested in starting a group, I would be glad to help them do so, if they can contact me via your magazine or at my home address.**

**Due to other commitments, I can only offer to put you in contact with like-minded people in touch with each other and to offer advice gained through my experience with SUUG. However, anyone interested enough to contact me is probably the right type of person for the job - enthusiasm is the most important qualification.**

**I would like make to make two comments on the behaviour of the owners of the guild.**

**1 Pirated software is a fact of life. Providing the group is not part of such a practice, private arrangements made by members of the club can not really be helped. Remember that people eager to pirate software are attracted to all sphjeres of computing and that if they don't do it via club A, they will probably do it via club 'B' or elsewhere. Even the owner of a club is able to do all this; he is no diffferent to the rest of us. Providing he does not abuse the ethics of the club (ie obtaining software from retailers for the club and then pirating it) he should not be seen as being worse than any other pirate.**

**2 Disregarding the software piracy argument for a while (it is wrong, by the way), at least this person tried to set up a club for unemployed users. An admirable attempt regardless of his other failings or mistakes. There is a genuine need for clubs of this nature; hopefully they will exist for all major machines as time goes by.**

**Incidentally I also wrote to this person, offering help and advice, but never received a reply. Although I'm inclined to believe it was because I made no mention of software at all ( ie not a very good contact) I am also willing to give him the benefit of the doubt.**

**In fact I offer him the chance to reply to me and the other people who wrote to him now. I hope that *Express* will do the same.**

**I repeat my offer to people interested in starting an unemployed user group whatever help and advice I can give for an SAE.**
***P. Bocij, 19 Moore Street, Normanton, Derby, DE3 6SN***

*• Hear, hear – thanks for your letter. While the only practical help you can give the unemployed is a chance to earn a living, at least computer clubs can while away those long afternoons doing something fun and, who knows, useful too.*

*We're sending you some Spectrum software as the winner of this week's prize letter.*

in Malta is probably the same as his tired-eyed, square-backsided empty-pocketed English counterpart I am sending you a list of the ten things I hate most about computing.

1 Cats, or at least the ones that think my mouse is for real and therefore chew through the tail/wire (honestly!)
2 Mice that get caught - try using an Amiga without one while it's at the vet being mended.
3 Reading all the latest on computing and then having to count on my fingers at work.
4 The prices – bad in England, even worse in Malta.
5 Comms networks that don't get as far as the Mediteranean
6 Games that look pretty, are pretty and are only pretty.
7 Gameplay, where gameplay means put the first disk in, take the first disk out, put the second disk in, and forget what it's all about.
8 Getting *Express* a month later than my English counterparts.
9 CLIs – Crazy Little Idea
10 People who write garbage just to earn a prize game to play on their computer. I won an Amiga and would love to obtain a copy of *Balance of Power - 1990* edition which has yet to appear in Malta!

Do you know of anybody who scored more than 100 points in one game while playing *Two vs Two Basketball*? If so I coach a basketball team here in Malta...actually the most I've managed is 94 points with the help of Larry Berg.
*Stephen Buttigieg, Floriana, Malta*

***• Greetings from a rainy and grey England, and Happy Christmas if it's not too late. Sorry, no copies of Balance of Power on the Amiga!***

***NB To all the clever dicks who remember that I said last week would be the last Top Ten, well I was lying, and this is definitely the last.***

### GOOD NEWS

Thank you very much for printing my letter (*Express* 42). Within half an hour of your magazine landing on my mat this morning the phone rang - a near neighbour, delighted to know another computer nut. Then, blow me down, another chap rang; I've invited them both in for drink this evening. Should be fun as I can't get about much; obviously we'll raise our glasses to the continued success of your excellent magazine.

May I now use your columns to congratulate one of your "colourful" advertisers, Silica Shop. I brought from them, mentioning your mag., of course, an A500 monitor and expansion and just use up my Access limit a Seikosha 180 printer. I then found that the printer was not on the instal list, but a phone call to Silica shop brought an instant solution. The printer is now shrieking merrily away. Silica Shop is not exactly a cheapie, but a man has to be fairly stupid not to realise that their prices include a first rate after-sales service.
*Leslie Barratt, Torquay*

***• We often get letters from mail order outfits moaning that we only publish letters of complaint about the cowboys. Well, it's nice to get the chance to print a letter with positive things in it for a change!***

***Have fun with your Amiga.***

### GIRL TALK

In reply to the pervie (sic) in *Express* 41 – yes there are "girlie" gamesplayers out in the world (though I'm a little old to be called a girlie). Favourite games? A little world domination (*Populous*) the occasional subterranean frolic (*Dungeon Master*) some aerial acrobatics (*Falcon*) lots and lots of brain-bashing (*Archipelagos* and *Sentinel*), but one of my all-time favourites is a budget game picked up for my first computer, a C64, called *White Viper* - it was brilliant!
*Gilli Marsh, London*

***• My girlfriend thinks computer games are 'silly'. If only she knew much more about the home micro scene, she'd know just how right she is.***

## SNIPPETS

### EVERY WHICH WAY BUT INVERTED

**...Why did you print the picture of the 'mongoose' (or was it a girlie?) in *Express* 42 the wrong way round? The *Financial Times* she's reading is mirror-image!**
***J Rowells, Birmingham***

*.sredaer drawkcab era sesoog-nom taht swonk enoyreve*

*esuaceb s'taht ,hA •*

### BEEB, BEEB

**How dare you criticise the Beeb (*Express* 42)! It is still one of the best home machines and I have never used any other...**
***M Stone, Tiverton, Devon***

*• Er, how do you know if it's one of the best machines if you've never used any other?*

### PCW PATCH UP

**About time we PCW owners got justice! PCW Patch this week (*Express* 43) was a half page. Keep it up!**
***Ms M Hill, Kingston***

*• Sorry, it was only to fill out the gap left by the non-existent Atari eight-bit column.*

### SUPER COMPUTER

Rather than all the moaning and groaning that's been going on in your letter page recently, why don't you ask your readers to write in with ideas for the best possible computer? Here's the specification for my computer:

1 Capable of running 4.5 billion instructions in a millisecond
2 Eight channel sound chip with rounded 'envelopes' and stereo sound
3 4000 x 7000 screen resolution
4 Five million colours on screen at once
5 Built in sound digitiser
6 10Mb RAM
7 A drive capable of holding 4Mb.
8 Built in microwave, alarm clock, stereo speakers, 10p slot (charge your friends)
9 Lap toppable (You'll need one helluva lap!)
10 £50 (Buy one get six free!)

No, seriously though it would be a good idea to hear of your readers 'dream' computer or computer game. Who knows perhaps Jack Tramiel will be reading the mag?
*Rob Chapman, Kenilworth, Warks*

***• I guarantee what will happen next. We'll get an MSX owner writing in saying that the MSX 2 has the above spec already.***

### SOCCER IT TO ME

Your feature on computer football got my mind whirring on what firms should sponsor particular teams.

I know Commodore sponsor Chelsea, but the only thing Amiga users and Chelsea seem to have in common is that they are a bunch of hackers.

Here are some other alliances which would be good:

1 NCube should sponsor Wimbledon as both their activities are above our heads
2 Amstrad could either sponsor Newcastle Utd or Notts County, The Magpies, 'cos they always steal other people's ideas.
3 Acorn and Nottingham Forest would go together (work that one out for yourself)!
4 Mandarin Software might appeal to Ipswich Town – well they're virtually a right bunch of lemons.
5 Midland bank Automatic Cash Dispensers should be sent to Coventry City, nobody talks to them because they don't listen.
6 Virgin could have sponsored Maidstone Utd. until they discovered an interesting new place (don't be smutty, it's Dartford & the 4th Division).
7 The machine producing Access cards would be let in at Luton Town, both have nasty little pieces of plastic and it'll be only friend they'll ever have, flexible or otherwise.
8 Bubble Bus could sponsor the trip to away games for West Ham.
9 Okimate could adorn the vests of any Scottish club or perhaps the back of the shorts worn by Queen of the South.
10 Finally Middlesborough can choose from Zenith, Superior, Elite or Epyx, well you've got to have the best name for the best team.

I also wondered what would be the favourite computer games of people connected to football, here are a few suggestions:

Steve McMahon - *Bonecruncher*
Tony Gubba - *Fish*
Chris Waddle - *Frogger*
Man Utd. entire team - *Impossible Mission*
Notts. Forest pitch invaders - *Run the Gauntlet*
Graham Souness - *Kick Off*
Gazza - *Pacman*
Bernie Slaven - *Predator*
Tony Adams - *Donkey Kong*
Vinny Jones - *Marble Madness*
*Alex Card, Aldeburgh, Suffolk*

***• Re Virgin's proposed sponsorship – is there a footy team in Maidenhead? Perhaps Terry Butcher could feature in Blood Money after the Sweden game?***

***On a completely irrelevant note, is anyone else getting irritated by David Icke's habit of putting a gratuitous pause two or three words before the end... of each sentence?***

### BOARD MEETING

Steven W. Green's letter sums up my view as a user of bulletin boards (BBS) and I feel that your editorial comment showed little empathy and over tones of ignorance. It certainly did not do anything to encourage anyone using one of the most interesting aspects of computer usage.

I have linked with many amateur bulletin boards received enormous help and advice, not to mention down loading utilities and games for my son. Keith Wassell the sysop of PC Forum (0322 335348) also runs echomail which provides the international communications that Steve referred to.

I have never had any problems with the downloaded software and have no complaints whatsoever – only praise – for these guys that have turned their expensive hobby into a useful means of sharing their time and expertise with others.

Print this letter to show Steve that he is appreciated and you are capable of positive press - even better - leave him a message on his Bulletin Board message area and see the response it gets - I will.
*Kevin Smith MSAET, West Hunsburg, Northampton*

***• Well, I can't leave him a message on his bulletin board because I'd find it quicker and more convenient to send him a letter. We're glad to print your comments and show the positive side of comms, but I'm afraid I remain to be convinced to take it up!***

In an age where there are different types of computer, what we need most is some kind of compatibility, however weak it may be. Surely whenever a computer manufacturer launches his new machine he wants to be able to tell his customers that they can still at least read their old data, even if they can;'t execute their old programs. So why can't ANSI or BSI get together and design a disc format and make it suitable for every machine?

I believe the ST can read PC discs so full marks to them. Acorn seem to have made a half-hearted attempt with their Archie, by offering a PC emulator which will read the more widely accepted format, but why on earth they couldn't have made RISC OS read and write PC discs is beyond me.

Everybody knows that compatibility sells things - look at all those *1-2-3* clones!

Come on manufacturers, get your act together.
*Dave Tonge, Manchester*

### PEDANT'S POINT

***(strictly, a subset of two-dimensional space)***

In the Shopping Express 50 Top PCs feature (Express 43) you list the Amstrad PC1640 as a CGA computer. Not so! All PC1640s are fitted with EGA display electronics, even those supplied with mono monitors.

True, if you buy the model with low resolution colour monitor instead of high resolution ECD monitor you will not be able to display the highest resolution EGA modes, but that does not make the computer a CGA machine. I note that you list a number of other computers as VGA equipped even though the version reviewed actually comes with a mono monitor.

It is the PC1512 which is CGA only, and to which the description "bottom of the usable-range Amstrad PC" might properly apply.

Come clean, you researched this piece in an afternoon at Dixons didn't you? Have you actually got a PC compatible of any kind in the Express office yet?
*Iolo Davidson, Tetbury, Gloucestershire*

*• Yes, we have a PC compatible, an Opus IV. If you'd like to do the next PC round-up, we'd be glad to hear from you (no, seriously!)*

# MOVE ON UP

*The revolutionary Konix multi-system will drastically affect the games market. Kim Harmagh looks at the implications*

The struggle for realism has been the drive behind one game after another and with the emergence of new 16-bit consoles which have added extra colours and speed, real-life simulations from car games to space shoot-'em-ups are constantly leading the field.

The Konix multi-system has taken a gigantic step forward by providing a superb simulator environment in the shape of a powered chair which can toss you from side to side depending on the dictates of the game. The resulting system involves the player in a manner which goes far beyond just a visual and audio experience and has only been seen before in the *Thunderblade* arcade machine with its chair and helicopter control deck.

## Affording the dosh

Creating the system is one thing but it won't sell unless the price can be kept down and the technology can still lead the field. The multi-system's advantage is that it's being sold as separate units to cater for the varying budgets of home users. The main console weighs in at £200 while the chair can be added on later for another £200. Additional extras like the light gun and helicopter stick all come at less than £50.

The forthcoming 16-bit Sega console and the PC Engine represent the main competition in terms of actual computer hardware, but the multi-system uses RISC-based technology with dedicated hardware scrolling and an amazing sound system to compete in this department and all at an affordable price. Konix boss Wyn Holoway explained that with this combination Konix hoped to take 50% of the console market worldwide by the middle of 1990. That kind of following is sure to stir other console manufacturers into coming up with the same combination of price and technology.

• The basic unit of the Konix system will cost around £200, with a chair as an optional extra

## Software support

Nevertheless, without the support of the software houses the multi-system will go the way of the Archimedes. The main reason that the 16-bit Sega console won't make an appearance in the UK much before Easter 1990 is that there is little software support for it. When it does eventually arrive, it will be able to run all the software available for the eight-bit Sega so that there will be as much support as possible. Konix have recognised the importance of software houses' support – right from the initial concept they've made sure that there will be games available. This has meant commissioning development as well as attracting the interest of a number of the software houses. Empire and US Gold are already showing an interest in the multi-system because they see it as a sure-fire success but still more companies must be won over.

At the moment the software is at the stage of ST and Amiga quality games. They employ more colours but they're no more than conversions of PC games. However the future of the multi-system looks healthy and it could lead the game market into a new dimension.

The emergence of this new system will have an impact on the ST and Amiga which have always tried to be consoles. Atari have recognised this and are concentrating their attentions on releasing the TT machine which will be a replacement for the ST, aimed at the serious user. To support their games front they have released their own console unit which goes to prove that even the big boys are aware of a big upheaval in the home computer scene.

In five years time we may well see the serious and games markets split totally in two. To play games you'll buy a console and to do wordprocessing you'll buy a business machine. Both will be light years ahead of current systems and it's great see a British company like Konix on the cutting edge. ●

### THE KONIX CONSOLE

The aim of the console is to provide a realistic environment for a number of different types of game. It's built like a W with one bar of the W housing the monitor and the other looking after the chair. The shorter rod in the middle supports the console unit as well as the gameplaying instruments. This is a plastic design which can be transformed simply into a steering wheel, handlebars or yoke.

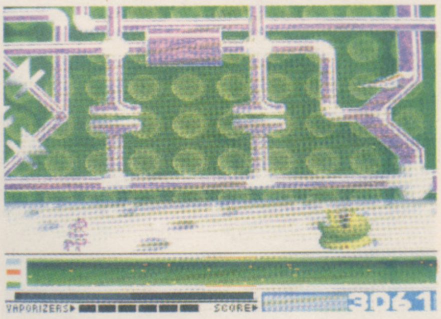
What is most exciting about the multi-system is the way that the chair is moved under software control. A series of drives bolt the pivoting chair backwards and forwards depending on your reactions. A judder feature shakes the chair violently when you hit an obstacle.

But the unit isn't just capable of some nifty neuro operations. It's a 16-bit machine which can display 256 colours on screen in low-res mode, and 16 colours in two other modes. The machine comes with 256K of memory but using it in low-res. mode with the full range of colours instantly occupies another 50K so there are limitations which programmers will have to overcome.

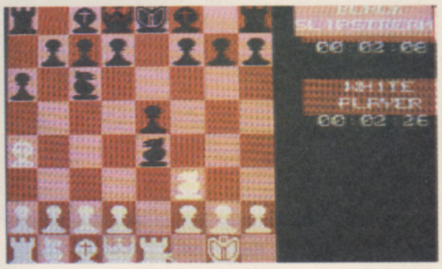
Nevertheless, with dedicated hardware scrolling it's a 'well-wicked' machine, as software developer Jeff Minter is fond of saying.

POSITION
STATUS
MPH
REVS
OIL
FUEL

• *Bikers* is a racing game and will be included free with every Konix system and has been written specifically to show the multi-system at its best

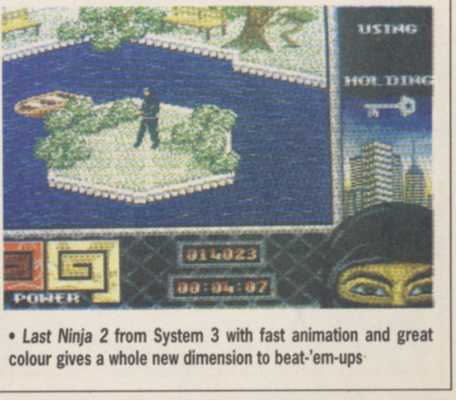


• *Starray* is a conversion of Logotron's hit designed for the multi-system and exploiting the 256-colour palette



• Konix Chess is based upon Pandix – the world amateur computer chess champion and will make use of the power chair

• Llamasoft's Jeff Minter goes to town with the full 256-colour palette in his *Mutant Camels* game



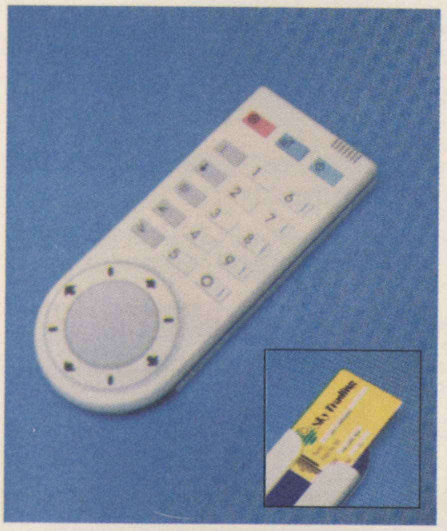
• *Last Ninja 2* from System 3 with fast animation and great colour gives a whole new dimension to beat-'em-ups

# AIR PLAY

*By the end of next year you could be playing your favourite flight sim at 35,000 feet. Andy Storer takes a look at sky-high entertainments...*

Air flights are only marginally less dull than the airport lounges you sit in for hours just dying to leave. Once you're airborne and the stewardess has completed her Magnus Pike impressions there's nothing left to do except wait for your laptop lunch. Until now. Step in Plessey Avionics and its Integrated Flight Entertainment and Services System.

Costing £1.5 million per plane, IFESS is a computer-based system connected by a fibre optic network providing every passenger with a liquid crystal colour display, a headset and a keyboard at their seat. Besides being able to make phone calls to anywhere in the world, you'll also be able to access video games, video and audio channels, mail order shopping and business services. All, of course, for a price. You'll pay for the services and entertainments as you use them by simply slipping your credit card into your keyboard - remote purchasing which Plessey believe will generate revenues each year of around $1 million for a single 450-seater 747. This is underlined by the fact that each time you click a choice of viewing, the wait-state endured while IFESS accesses its databanks is filled with a still-image commercial!



• Your credit card slips into the back of the handset and

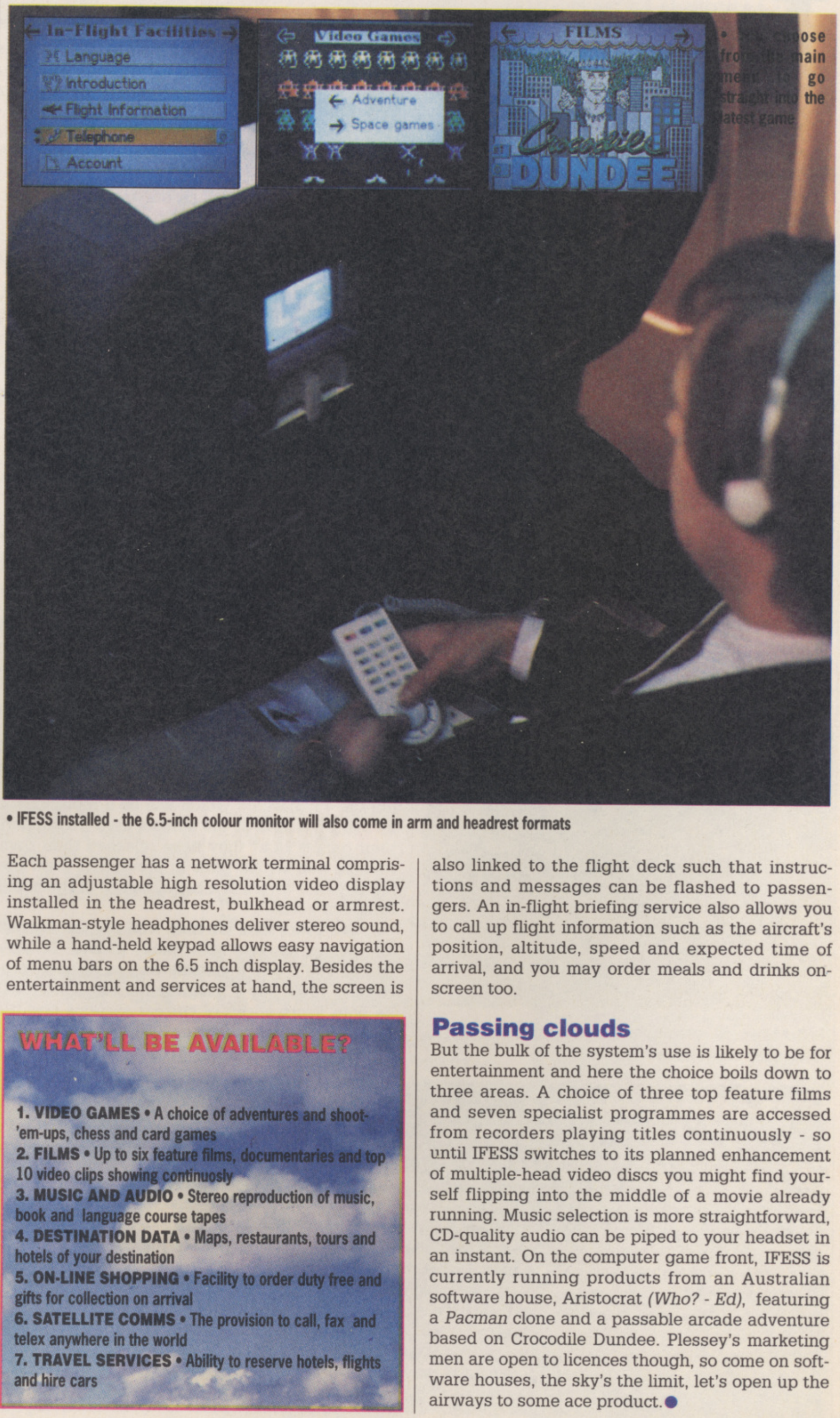
## System check

With such lucrative profits in the air, it's no surprise that the IFESS system has been three years under development. It comes to you courtesy of the military technology Plessey developed for satellite-based airborne communications, navigation, surveillance and flight data recording. At it's heart is an optical Ethernet, a Local Area Network running on fibre optic cables, which handles all communication and distribution functions and is driven by dual 570Mb mini-computers. With one running as a back-up, these hold the system database and handle the video, audio, data and voice communications switching.

### THE SKY'S THE LIMIT

Airspace is nowadays crammed with over three million passengers flying each day and by 1995 it's estimated there'll be 10,000 airliners in flight at any one time. Plessey expect the first IFESS to be installed by the end of the 1990 -  in Paramount's aircraft. But most airlines won't be installing until 1991. At a cost of up to £2 million per plane, IFESS doesn't come cheap, but then this is offset by the huge revenues it's expected to generate.

Plessey's approached 80 airlines with the system of whom 40 are interested and six are under 'firm negotiation'. It's also approaching airport authorities with a view to installing IFESS in departure lounges - venues where, for most European destinations, you can be sat for longer than the flight itself!



• [illegible] choose from the main menu to go straight into the latest game

• IFESS installed - the 6.5-inch colour monitor will also come in arm and headrest formats

Each passenger has a network terminal comprising an adjustable high resolution video display installed in the headrest, bulkhead or armrest. Walkman-style headphones deliver stereo sound, while a hand-held keypad allows easy navigation of menu bars on the 6.5 inch display. Besides the entertainment and services at hand, the screen is also linked to the flight deck such that instructions and messages can be flashed to passengers. An in-flight briefing service also allows you to call up flight information such as the aircraft's position, altitude, speed and expected time of arrival, and you may order meals and drinks on-screen too.

### WHAT'LL BE AVAILABLE?

1. **VIDEO GAMES** • A choice of adventures and shoot-'em-ups, chess and card games
2. **FILMS** • Up to six feature films, documentaries and top 10 video clips showing continuosly
3. **MUSIC AND AUDIO** • Stereo reproduction of music, book and language course tapes
4. **DESTINATION DATA** • Maps, restaurants, tours and hotels of your destination
5. **ON-LINE SHOPPING** • Facility to order duty free and gifts for collection on arrival
6. **SATELLITE COMMS** • The provision to call, fax and telex anywhere in the world
7. **TRAVEL SERVICES** • Ability to reserve hotels, flights and hire cars

## Passing clouds

But the bulk of the system's use is likely to be for entertainment and here the choice boils down to three areas. A choice of three top feature films and seven specialist programmes are accessed from recorders playing titles continuously - so until IFESS switches to its planned enhancement of multiple-head video discs you might find yourself flipping into the middle of a movie already running. Music selection is more straightforward, CD-quality audio can be piped to your headset in an instant. On the computer game front, IFESS is currently running products from an Australian software house, Aristocrat *(Who? - Ed),* featuring a *Pacman* clone and a passable arcade adventure based on Crocodile Dundee. Plessey's marketing men are open to licences though, so come on software houses, the sky's the limit, let's open up the airways to some ace product. ●

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# EXPRESS VOUCHERS - How the scheme works

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2. Each voucher entitles you to a discount at the voucher's face value, **provided** that your overall order level is **higher** than the figure indicated on the back of the voucher.
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4. The order including the voucher must be received by the advertiser before the closing date printed on the voucher.
5. You must fill in the details on the voucher.

# 50 PC ESSENTIALS

The PC has an enormous range of software available for it, but the choice can be bewildering. Read on to discover the Shopping Express guide to 50 indispensible programs

There's probably more software for the PC than for all other machines put together, so a comprehensive list is clearly impossible. Choosing 'the best' fifty programs is impossible too – it depends on what you want your PC to do. But here's the *Express* list of the 50 programs we think should be at the top of your shopping list. Word processors, home accounts, spreadsheets, programming utilities... the list goes on and on. We've cut down our categories to include software that you can't afford to be without, at home or at work; the essential PC software.

We give what we consider to be the all-round best program or programs in each section, together with a brief description of each, and a few highlights and drawbacks. There's also the availability details, though as ever, check the mail order ads in Shopping Express first. You're sure to find some excellent discounts available.

## WORD PROCESSORS

### ● PROTEXT V4

**£100 • Arnor • 0733 68909**

For sheer text and file handling Protext stands out. It's fast, flexible and full of features; good spell checker and mail merge facilities so powerful you can write program-like text and file handling routines. For writers and journos this is a must.

**▲ Fast**
**▲ Spell checker**
**▲ Powerful mail merger**
**▲ Powerful macros**
**▲ Loads of extras – calculator, word counter etc**
**▲ Two file editing**

**▼ No real graphics capability**
**▼ Not good at handling complex layouts**

**VALUE FOR MONEY •••••**

### ● TASWORD

**£50 • Tasman Software • 0532 438301**

Superb value and fast. A few odd limitations but an excellent basic word processor. TasSpell, the spell checker, also available, along with TasRes, the memory resident version of the processor.

**▲ Memory resident and fast**
**▲ Easy to customise**
**▲ DOS shell macros**
**▲ Word count, notepad features etc**

**▼ Clumsy text insertion**
**▼ Some limitations – find and replace won't accept spaces, blocks must be whole lines etc**

**VALUE FOR MONEY •••••**

### ● CELEBRITY

**£80 • Software Paradise • 0222 887521**

A well designed word processor with a lot of extras and plenty of appeal for the first time user. It doesn't show the compromises usual with beginner's packages.

**▲ Good clear command structure**
**▲ Calculator, calendar, DOS manager etc**
**▲ Thesaurus and spell checker**
**▲ Up to four text windows**

**▼ Thesaurus US and a bit slow**
**▼ Window dimensions fixed**

**VALUE FOR MONEY ••••**

### ● MULTIWRITER 2

**£115 • NewStar Software • 0245 265017**

A very powerful package that includes many features usually found only on really expensive word processors. WordStar dot commands can be included directly in a document so this may be ideal for WordStar diehards. Lots of extras – author's utilities and a filing program, for example.

**▲ WordStar compatible**
**▲ Good menu and context sensitive help**
**▲ Extras: contents and index generator etc**
**▲ Filer utility**

**▼ Filer awkward to use**

**VALUE FOR MONEY ••••**

### ● BORLAND SPRINT

**£199.95 • Borland • 0734 320022**

A hugely powerful word processor – certainly worth looking at if you need the complete works. Breathtakingly fast with an autosave feature that means even if the power goes your document has been saved exactly as it was at that moment. Comes with front ends that make it look like WordStar, WordPerfect, MultiMate or Microsoft Word if you're used to those packages. A bit complicated to use though and modelled on C, which doesn't help.

**▲ User interfaces for WordStar etc**
**▲ Thesaurus and check-as-you-type spell checker**
**▲ Cross-referencing**
**▲ Very powerful indexing facilities**
**▲ Laser and PostScript support**

**▼ Very complex to use – only get it if you really need all the power**
**▼ Still a few little bugettes**

**VALUE FOR MONEY •••••**

### ● MICROSOFT WORD

**£395 • Microsoft • 0734 500741**

Another of the heavyweights. Packed with every feature you can imagine, but you're paying for it. Easy and intuitive to use for such a high-powered package – ideas outliners, contents/ indexing and footnotes, very good graphics facilities – and of course it runs under windows and OS/2.

**▲ All the heavyweight features:thesaurus, spell checker, author utilities**
**▲ Ideas outliner**
**▲ Good graphics import facilities**
**▲ Runs with windows and OS/2**
**▲ Easy to use**

**▼ Very pricey**
**▼ Need a powerful machine – slow unless you have a 286 or 386**

### ● WORD PERFECT

**£250 • Sentinel • 0932 231164**

Supposedly the biggest selling word processor on the PCs. A huge program with everything you could ever need: thesaurus, spell checker, two column text, footnote and index generation, automatic date insertion, end notes, mathematical symbols etc etc etc. Frankly though a disappointment for the huge price; only any use if you're already committed to the program because of training – or if you can get it on expenses.

**▲ Everything you could ever need in a word processor**
**▲ Exemplary manual**
**▲ Available on minis, mainframes as well as micros**

**▼ Vastly expensive**
**▼ Some very complex keystrokes for functions – must be learned by rote**

**VALUE FOR MONEY •••**

### ● CHIWRITER

**£92 • Shareware Marketing • 0297 24088**

The word processor for scientists. Originally a shareware product, this word processor lets you design and use predesigned fonts for scientific use. Can cope with any mathematical symbols – even the most complex integrals for example. The most impressive WYSIWYG you'll ever see! Might be worth hanging on a couple of months for the PC version of LocoScript though, which will no doubt outperform Chiwriter for less money.

**▲ Handles any maths – integrals, complex set theory symbols etc**
**▲ Does foreign characters too**
**▲ Footnotes and font designer**

**▼ Limited as a word processor: no mail merge, word count only after spell check**
**▼ Only one document at once**
**▼ Hidden extra costs for hi-res or screen**

**VALUE FOR MONEY •••**

### ● TOPCOPY PLUS

**£109 • Innova Software • 0453 835379**

Big brother of Topcopy – a very powerful and well-featured word processor. Verging on the 'big league'. Very fast – memory resident – and keeps everything reformatted as you go. Multi document handling together with the speed of operation makes it ideal for people who shunt text around a lot. good spell check and mail merge too.

**▲ Memory resident**
**▲ Can import text from defined areas of underlying screens**
**▲ Auto reformats but still fast**
**▲ Three files on screen at once, handles up to six documents**
**▲ Spell checker and mail merge**
**▲ Very fast**

**▼ One or two useful commands missed (eg. swop letters)**
**▼ No auto backup of files**

**VALUE FOR MONEY ••••**

### ● GALAXY

**PD (ie. free) • Advantage/ PDSL • 0242 224340/ 0892 663298**

One of many public domain word processors that resembles WordStar. Doesn't compete with ones you pay a hundred quid for, but for the price of a disk you get a usable program ideal for occasional use.

**▲ Menus**
**▲ Spell checker**
**▲ For the price of a disk!**

**▼ Restricted power – best for occasional user**

## SPREADSHEETS

**Probably one of the primary uses for PCs, the spreadsheet is the staple of**

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**Esti2** - Invoicing and Estimating System for the Printing Trade
*Customer File, Calculations based on Stock and Action Codes held on disk*
**£120**

**QFile Utility** - Selective Copying and deletion of files held in various directories
**£45**

*Prices are exclusive of VAT, but include P&P. User Guides supplied with software and training given if required at moderate charges.*
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Vine Micros can supply a large range of PC-TV Adaptors which allow the connection of PCs to standatd TVs, Videos and Monitors. Both CGA and EGA versions are available - the latter being able to support 640 x 350 line modes (only 280 lines viewable at any one time) with a full 64 colour pallette. Our UHF Adpators (not suitable for PC1512) connect to both a TV, throught its aerial socket and to a video recorder. The SCART Adaptor is only for TVs with a suitable connector but does give a near monitor quality. Other adaptors include a monochrome composite video version, a digital version for connection of BBC micro or Amstrad CPC colour monitors and a device to allow the Amstrad PC1512 to use a standard monitor.

| | | | |
|---|---|---|---|
| **CGA UHF** | **£44.95** | **CGA SCART** | **£34.95** |
| **EGA UHF** | **£59.95** | **EGA SCART** | **£39.95** |
| 1512 Monitor Adaptor | £19.95 | (PC1512 SCART | £39.95) |
| Monochrome CV | £29.95 | Digital | £34.95 |

All adaptors (except PC1512 monitor adaptor) require seperate 12v mains adaptor £5.75.
All Prices exclude VAT - carriage free in mainland UK

**EGA Genlock Video Adaptor**
Vine Micros latest product is the EGA Genlock Adaptor - this allows overlaying of computer text/graphics on TV, Video recorder and camera displays. The adaptor will be demonstrated at the Personal Computer Show (Stand 2438). Available Oct/Nov RRP approx £120.

**See us at the Personal Computer Show Stand 2438**
**Ring/FAX 0843 225714**
Vine Micros Ltd, 47/48 Hawley Sq, Margate, Kent, CT9 1NY

**the small business user and some of the best around are available for the PC.**

### ●VP PLANNER PLUS

**£172 • Paperback Software • 0245 265017**

Fully featured, Lotus 123 compatible spreadsheet generally held to be the ultimate in PC spreadsheet programs. There's support for a mouse as well as multi-dimensional financial modelling.

**▲ Comprehensive**
**▲ Complex modelling can be achieved**
**▲ Reasonably priced (there's a cut-down £115 version too)**

**▼ Difficult to learn**
**▼ Hard drive and printer required**

### ● LUCID 3-D

**£91 • PCSG Inc./Software Paradise • 0222 887521**

Cheap spreadsheet from PCSG lacking graphics but with the ability to perform most of the necessary functions. There's no 'minimum hardware' requirement and it's cheap. Also features 3-Dimensional linking of cells from different spreadsheets.

**▲ Cheap**
**▲ Linking of seperate spreadsheets**
**▲ No minimum hardware requirement**

**▼ No graphics**

### ● THE TWIN

**£67 • Mosaic Software • 0604 830496**

Cheap 'n' cheerful spreadsheet that is the younger sibling of the outrageously named Legend: Twin Level III. The Twin is an almost exact copy of Lotus 123 at a fraction of the cost of that eponymous program. Well worth 67 quid.

**▲ Cheap**
**▲ All of the features of Lotus 123**
**▲ Powerful graphics**

### ● LEGEND: TWIN LEVEL III

**£207 • Mosaic Software • 0604 830496**

The spreadsheet that sounds like an adventure game. Burrow deep into the powerful Lotus 123-like features such as 3-dimensional cell linking, graphics and database functions.

**▲ 123 features provided**
**▲ 3-D cell linking**
**▲ Powerfull**

**▼ Not for the spreadsheet novice**

### ● PC-CALC PLUS

**£57 • Shareware Marketing • 0297 24088**

Extremely cheap basic shareware spreadsheet that is nonetheless good quality. All necessary spreadsheet functions implemented. You can get a version of this spreadsheet complete with – cut-down – manual for five quid from PC user groups. Full documentation will require registration with Shareware Marketing and the handinf over of the full price.

**▲ Cheap, cheap, cheap**
**▲ Easy to learn**
**▲ Widely available from user groups**

**▼ Basic**

## DATABASES

**Everyone needs a database. From business use such as motor car parts, baked beans stocks and can opener suppliers to home uses such as stamp and record collections and train number cataloguing.**

### ● DBASE IV

**£595 • Ashton-Tate • 01-5699768**

The database that's got it all. Spawned a huge range of clones for many other machines. Complex and all reaching, dBase is a database-specific programming language that allows you to build filing programs tailor-made to your own requirements.

**▲ Complex**
**▲ Can be tailored to suit individual needs**
**▲ Industry standard**

**▼ Expensive**
**▼ Not for beginners**

### ● DBXL 1.2 (DIAMOND RELEASE)

**£115 • Software Paradise • 0222 887521**

dBase clone featuring all the abilities of the original with a better text editor, variable arrays and user defined functions at an affordable price.

**▲ Cheap**
**▲ Very powerful**

**▼ Difficult to master**
**▼ Not for beginners**

### ● TAS PLUS

**£120.75 • Megatech • 01 874 6511**

Powerful database that allows you to spread a database over many files. It's programmable, relatively easy to use and cheap.

**▲ Fully featured**
**▲ Easy to use**
**▲ Cheap**

### ● HYPERPAD

**£114 • Software Paradise • 0222 887521**

Apple Macintosh users have long had the opportunity to use the definitive associative database handling of Hypercard based on the concept stacks of interconnected cards each containing various data, programs etc., all accesible via a serious of icon 'buttons'. And now, at last, this power is available to the humble PC user with Software paradise's Hyperpad. All the features of the original system are here.

**▲ Comprehensive**
**▲ Easy to use**
**▲ Moderately priced**

**▼ Setting up may confuse absolute beginners**

## COMMUNICATIONS

**Got a yen to communicate with your fellow PCers? Need to transfer data around the planet? Maybe you want to connect several computers together to maximise your peripherals?**

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| 256K x 9 - 100 | 35 |
| 256K x 9 - 80 | 40 |
| 256K x 9 - 60 | 49 |
| 1M x 9 - 100 | 112 |
| 1M x 8 - 80 | 118 |
| 1M x 9 - 100 | 118 |
| 1M x 9 - 80 | 124 |
| 1M x 9 - 70 | 129 |
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| 256K x 1 - 10 | £3.50 | 1M x 1 - 10 | £8.50 |
| 64K x 1 - 10 | £3.50 | 256K x 4 - 10 | £8.50 |

## VGA BOARDS

Graphics cards for the IBM PC AT/XT and compatibles. Also PS/2 Models 25 and 30.

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## IBM XT/AT UPGRADES

Extended/Expanded memory for PC Bus

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| 512K | £295 | 1MB | £725 |
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| 50.70 | 2MB | 345 | 80 | 2MB | 150 |

## PS12 EMS UPGRADES

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| 2MB | £520 | 8MB | £1270 |

## COMMODORE/AMIGA 500

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| | 96 tpi | 720K | 84p | 8.00 | 16.00 | 37.00 | 72.00 |
| | HD | 1.6 meg | 1.30 | 12.50 | 24.50 | 58.00 | 114.00 |
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| | 135 tpi | 2 meg | 3.50 | 35.00 | 75.00 | 150.00 | 300.00 |

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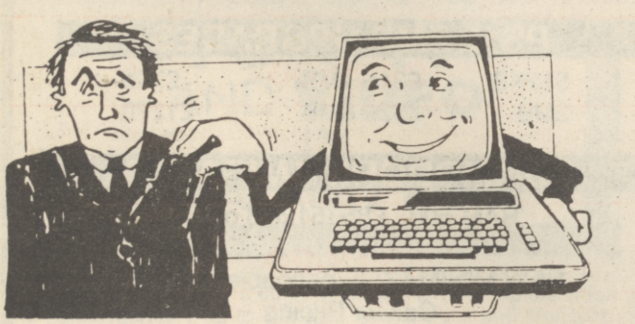

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## ● THE $25 NETWORK

**£25 • EQ Consultants • 0334 84248**

Networks abound at the moment but you'd be hard pushed to find one that would set you back less than several hundred pounds, before, that is, the release of The $25 Network from EQ Consultants. For the tiny figure of 25 quid (EQ alas, hold no stock in exchange rates) you can join two PCs in perfect harmony, to have and to hold, from this day on...

**▲ Amazingly cheap**
**▲ Everything you need (except a cheap null modem cable)**
**▲ Easy to use**

## ● CALLBOX

**£171.35 • Callbox Ltd • 0600 4478**

A program which takes control of your telephone allowing you to perform all manner of snazzy dialing functions, nember recalls, auto calls etc. All this for only one hundred and seventy one pounds, wow!

**▲ Cheaper than equivalent hardware (i.e. telephone)**

**▼ Breath-takingly expensive**
**▼ Only for those without the energy to dial a number**

## ● LINK MASTER

**£19.95 • Amstrad Software • 0277 230222**

Billed as the 'complete kit for file transfer between two PCs' thereby implying a hard/software cast of thousands, Link Master is a cable and bit of software for £20 that allows you to transfer files between two PCs. Why not just use floppy disks? Perhaps that would be asking too much...

**▲ Cheap**
**▲ Easy to use**

**▼ Superfluous**
**▼ Unecessary (unless you have machines with wildly differing drive formats**

## ● PROCOMM PLUS

**£59 • Shareware Marketing • 0297 24088**

Fully-featured genral purpose communications program for use with modems. The program supports the industry-standard Hayes command language and seven file transfer protocols. There's an earlier version known as Procomm which can be had from the same supplier for a few quid.

**▲ Reasonably cheap 'n' cheerful**
**▲ Hayes compatible**
**▲ Plenty of file transfer options**

# ACCOUNTING

**The serious side of the PC. And let's face it, if you've spent the enormous sums necessary to buy the compuyer system, your going to need to save money somewhere.**

## ● MICROSYSTEMS

**£454 • Multisoft • 0420 85572**

Very powerful accounting package emanating from well-known accounts software writers Multisoft. Menu driven programs ensure ease of use and give access to virtually every possible accounts function necessary. There's some extremely good help screens too in case you should encounter difficulties.

**▲ Menu driven**
**▲ Fully featured**
**▲ Easy to use**

**▼ Too expensive for the home or small business user**

## ● A-B-C

**£299 • A-B-C Systems • 01 661 0488**

Quality accounting package that has the distinction of sporting a word processor, database and spreadsheet as well as the accounting module. All the features of a professional accounts application are built into A-B-C as well as good after sales service and help from A-B-C Systems.

**▲ Built-in word processor, spreadsheet and database**
**▲ After sales service**
**▲ Can be used on single disk systems**

**▼ A little expensive for home users**

## ● PENNYWISE

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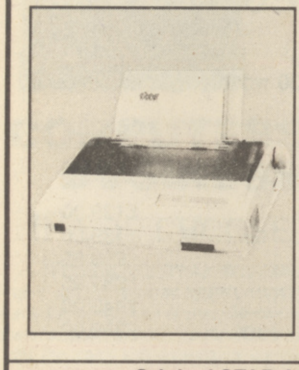

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**▼ You must have a mouse**

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**▲ Very cheap**
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**▼ Not for beginners**
**▼ Some minor bugs in first version**

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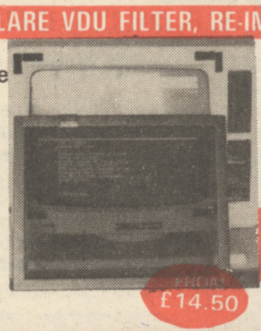

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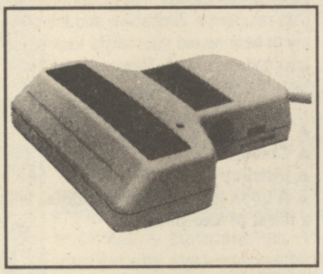

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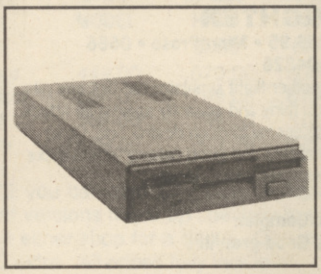

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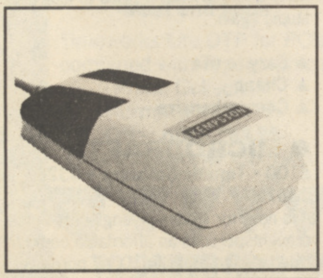

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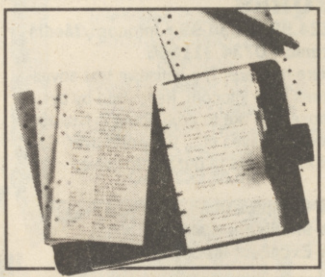

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**▼ Expensive**

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**▲ Fast**

**▼ Expensive (the eternal PC games criticism)**

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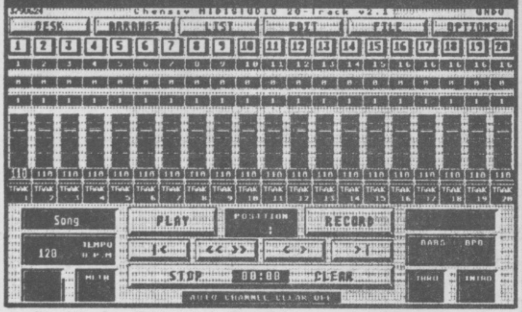

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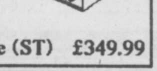

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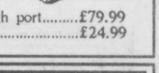

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**AMIGA** contacts wanted to swap demos, utils etc. overseas welcome 100%. Reply write to Karl, 40 Ellesmere Street, Patricroft, Manchester M30 0JN, England. Yo! S.P.G. & The Rest!

**AMIGA** contacts. I get hot demos every day. Hot reliable people only. Paul, Hollyfarm, Ormskirk Road, Bickerstaffe, Lancs. L39 0HD, England. Hi to Jon, Colin, Hamish, Lawrence, Simon, Dave Cullen.

**AMIGA** Users: Got a good P.D. collection, then how about sharing it. Demos wanted and any programming tips etc. Send list to: Zobb, 30 Golf View, Ingol, Preston, Lancs. PR2 7EJ.

**ATARI** ST contacts required for Atart St user. Very friendly. Loves computing. Any age or sex not fussy. Please contact. Write to 34 Uplands Drive, Brookmans Park, Herts. AL9 6PT. Phone 47025(5107) Ashley.

**CONTACTS** wanted to swap all the new stuff. Write to M. Brooks, 51 Selwyn Close, Mildenhall, Suffolk IP28 7QB. Hi to Derek and Paul who work at Bussens + Parkin.

**L28D** user wishes to contact other 128D users world wide or anybody who bothers to write or send disks all lamers or no hopers welcome, even girls or aliens! John Dickinson, 31 Carnforth Road, Monk Bretton, Barnsley, S. Yorks S71 2RB.

**MATURE** ST Contacts wanted. My interests include Flight Sims, GFA and Assembler Programming, PD Software and Utilities generally. No games list please. Mike O'Donnell, 5 Worthington Close, Runcorn, Cheshire, WA7 2QG

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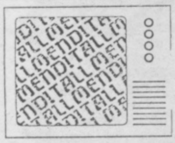

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**THIS** is an announcement. This ad is dead print proof that this mag prints strange things. So they must have a remote sense of humour (But don't quote me). James Farragher, 15 Whelan Way, Wallington, Surrey, SM6 7NG.

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**THE BATTLE FOR THE MID-RANGE MARKET** Six VGA 286s slug it out ● Surprise winner named ● Amstrad's 286 given a good going over ●
**PRINT SPOOLERS** ● What they are and why you need one ●
**FROM 640K TO 1MBYTE** ● Two expansion cards compared ●
**PC NAVIGATOR** ● Howard's Way simulator? ●
**ADD-ON FONTS FOR DESKTOP PUBLISHERS** ● Glyphix vs Typographica ●
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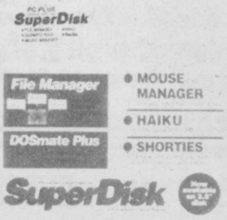
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* **Blitz Turbo** requires a second disk drive

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# TECH TIPS

**Personal computer problems? Express' Agony column has the answer. Write in strictest confidence to Uncle Techtip. The best tips win a freebie – so don't forget to tell us your address and machine**

### TIP Caught red handed?

**Regarding your reply to Richard Meredith (*Express* 43) I think you may owe him an apology. I am not aware of any commercial program for the PC entitled *Rogue*, but there is a PD/shareware program of that name and judging by the rest of his letter I would think that that is what he is referring to.**

**Assuming that he hasn't already fled to Brazil in fear of retribution by FAST, the answer to his problem of how to restore a previously saved game is simply to type `Rogue` followed by the name he used to save the game. So if he saved the game as Richard typing `Rogue Richard` will both load the game and return him to the saved position.**

*S. Parker, London.*

### HELP! CPC troubles

**I am writing to you in the hope that your expert knowledge and great connections in the computing world would be able to solve my computer queries. *(Jeez, these kids go from bad to worse – Uncle Techtip.)***

**1. Is it possible to upgrade my CPC464 into a 664 or 6128 using a 3.5-inch disk drive? How much would this cost and what hardware would I need?**

**2. If 1 is possible, then would I be able to acquire CPC commercial software on 3.5 inch disks?**

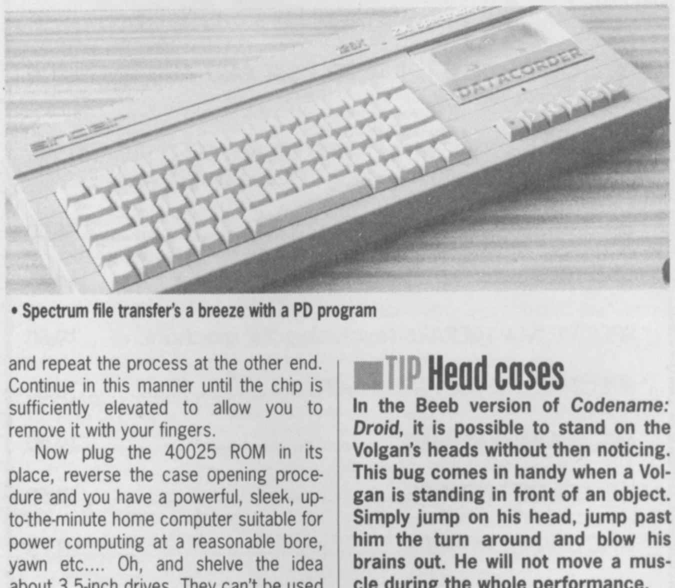
**3. Is there a backing up device which will back up tapes onto disk?**

**4. I use a modulator on my CPC (for my sins and for reasons of minuscule cash-flow) and in *Amstrad Action* I noticed a listing (issue 46) which gave a screen resolution of 400 pixels high using a monitor. My CPC with modulator automatically produces a screen res of 600 x 400 in all modes; has this anything to do with my modulator or do I need a new computer?**

*Mark Harrison, Redcar, Cleveland.*

1. Upgrading a CPC464 to a 6128 is a simple operation requiring little technical knowledge on your part and with a modicum of care and patience can be easily achieved by even the most hardened computer illiterate. That's the sales blurb over, now down to business. You need to obtain a BASIC ROM (part number 40025) price around £20. Contact CPC Ltd on 0772 555034. The new ROM will allow your CPC to access the extended BASIC commands of the 6128. You'll also need to upgrade the memory of the machine with an extra 64K to that of the 6128. Have a rummage through the classifieds in *Express*' sister magazine *Amstrad Action* for a suitable RAM expansion pack (the DK'tronics RAM pack should be obtainable second hand and is the best). A DDI-1 disk drive completes the package (necessary for running 6128 software). Contact Amstrad on 0277 228888 for current prices. Open the CPC case by undoing the screws on the underside and gently separating the upper and lower halves. In the process, you'll encounter a cable linking the keyboard in the upper half to the motherboard in the lower half. Unplug the cable from the motherboard. There's another plug just below the cassette player, unplug this too.

Locate the chip with Amstrad 40009 written on the surface (it's to the left of the circuit board). Remove any static electricity charge you may be carrying by touching a cold water or heating pipe. Gently insert the blade of a screwdriver under the BASIC chip and give a slight twist which should raise the chip slightly in its socket. Remove the screwdriver and repeat the process at the other end. Continue in this manner until the chip is sufficiently elevated to allow you to remove it with your fingers.



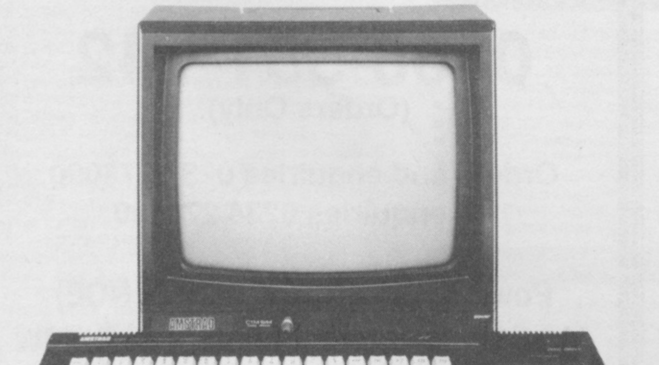
• Spectrum file transfer's a breeze with a PD program

Now plug the 40025 ROM in its place, reverse the case opening procedure and you have a powerful, sleek, up-to-the-minute home computer suitable for power computing at a reasonable bore, yawn etc.... Oh, and shelve the idea about 3.5-inch drives. They can't be used as a first drive for the Amstrad, neither can you purchase commercial software in this format.

2. Answered above.

3. There most certainly is. It labours under the title *Multiface* and is available from Romantic Robot contactable on 01-200 8870.

4. Very strange. Perhaps it's your modulator. I should leave well alone if you're not experiencing problems.



• Upgrading from a CPC464 into a 6128 is a fairly simple matter if you're feeling confident with a flat-blade screwdriver

### TIP Splish splash

**Have you ever wanted to load the *Interceptor* loading screen onto say *Deluxe Paint* Amiga version? *(Never – Uncle Techtip)* Well now you can! All you do is load *DPaint* in low res and then insert the *Interceptor* disk and load pictures, go to drawer and click low res, then backspace it all off and press Return. Go to file "Pix (dir)" and click it. Now click "splsh" and now click the load box and now you have it. But *do not* save it back on your *Interceptor* disk as it will not work.**

*T. Newton-syms, Chalfont St. Giles, Bucks.*

### TIP Spectrum transfer

**In your August 25th issue a Belgian reader asked for help with Spectrum/ST transfer. During a conversation with a friend he mentioned a program called *Specport.* This apparently allows transfer each way via an RS232 cable. It is available on disk A75 from STUK of Bishops Stortford (0279 751692), cost? About £3. He informs me that they also have a very good catalogue.**

*J. Trollope, Alness, Ross-shire.*

### TIP Head cases

**In the Beeb version of *Codename: Droid*, it is possible to stand on the Volgan's heads without then noticing. This bug comes in handy when a Volgan is standing in front of an object. Simply jump on his head, jump past him the turn around and blow his brains out. He will not move a muscle during the whole performance.**

**Although I have not tried it, it should be perfectly possible to run along a passageway perched atop an unsuspecting Volgan's head.**

*Rafael Jay, Bath, Avon.*

### TIP Free advert

**After reading your Tech Tips page last week I noticed a reader with a problem on the MSX.**

**To be more accurate *(I'd just like you to be more succinct – Uncle Techtip)* he needed help on the *Maze of Galious* by Konami. If you could please inform this person that I printed in the September issue of *MSX Gazette* a maze with all his answers on the *Maze of Galious.* I hold a regular cheats page and I'm sure that he'll find it useful .**

*R. Wilson, MSX Gazette, 47 Reedswood Road, Hastings, East Sussex TN38 8DW.*

## HELP! Drive bug

**I wonder if it is possible that you could help me with a problem concerning the Spectrum +3? Every so often I get the error report: DRIVE A: track 1, sector 1, missing address mark.**

**I cannot recover from this the only way out is to re-format the disk losing all my files. I've tried all makes of disk from Amsoft to Maxell to 'brand X' and they all do the same. What exactly does this mean? Is there any way out of it? Is it a drive fault? *(find out in next week's thrilling instalment of... – Unc)***

*Barry Walton, Whitley Bay, Tyne & Wear.*

Hmmm, seems to me there's a little bug lurking somewhere in the DOS. Any Techtippers know differently? Call your Uncle on the usual number. Don't format the disks. Try using a proprietary disk editor/doctor on them to determine faults and rebuild corrupt tracks. Several advertisers in *Express* offer these utilities at reasonable prices.

## HELP! Regal rescue

**My second ever purchase of *Express* (yes, I'm a new recruit) and it's straight to the problem pages. I own an Amstrad PC2086 with twin 3.5-inch drives and an external 5.25-inch drive *(you have got problems – Unc)*. The system performs well with the High Street packages such as *Lotus 1 2 3, dBase 4, WordStar* etc., but when it comes to games it's the pits! I have difficulties in loading the *King's Quest* series (they don't load) and arcade coin-op games like Capcom's *Street Fighter*. I spend half of my lunch hours taking games back to the Virgin Games store. So tell me Unc., is there any hope for me in this world? Should I swap the Amstrad for an ST or Amiga.**

*The King of Siam, Woolwich, London.*

Well your Royal Highness, Light of the East, Father of the World, the games appear not to like the external 5.25 inch drive. Are they copy protected? That could have some bearing on the matter. Other than that, I'm afraid my advice to you would be to adopt your own suggested course of action.

## HELP! Which PC?

**At present I use an Apricot F2 at home and find it very limited in the amount of software that is available. Software I have purchased from a number of suppliers allegedly suitable to operate, will not run. I also fell into the trap of joining a distant organisation claiming support, but which ended up being a get rich quick scheme for the proprietor *(alas Apricot owners are easy game – Unc)*. At work I use an IBM PS/2 model 80 and the difference is outstanding as I am able to use *Lotus 1 2 3* etc. I am now contemplating *(getting to the point? – Uncle TT)* obtaining a machine that I can use at home. I get lost in what is a compatible machine and would be most grateful to receive your advice. I had read that some of the Amstrad range are compatible and within a reasonable price range.**

**My Apricot has a 20Mb Winchester hard drive and I use a Quen-Data DWP1120 daisy-wheel printer. I assume that I could use the printer with PC software until I can afford a dot matrix? With respect to the Winchester, will I be able to use this with the likes of an Amstrad?**

*Hamish McNab, Glenrothes, Fife.*

Compatible means that the machine sufficiently resembles an IBM PC to fool software into running on it. Take a look at the *Shopping Express* guide to 50 top PCs given free with *Express* issue 43. Back copies available for the ludicrously inflated sum of 75p from Express Back Issues, The Old Barn, Somerton, Somerset.

## TIP Spare rib

**I think I can help J. Lambton of Guisely, Yorks (*Express* 42). If he contacts me I can supply all the manuals for the Coleco Adam he wants.**

*L. Jarvis, 14, Pevensey Avenue, Arnos Grove, London N11 2RD.*

## HELP! Amiga at Xmas

**I have a few questions for you on the Amiga 500 as I am seriously considering buying one for Christmas.**

**1. I would like to use the Amiga for word processing but mainly for programming. My set-up would be a Star LC10 printer, second drive and 1Mb memory expansion. Is this a good set-up for the desired uses?**

**2. Is there a major difference (aside from memory) between the A500 and A2000**

**3. What is *DiskDoktor*?**

**4. I have heard references to copying the Workbench. Is this easy to do?**

**5. Will proper computer centres upgrade the Workbench and Kickstart disks when improvements become available?**

**6. What are the chances of the A2500 or the A3000 superseding the A500?**

**Please, please, please print this letter for two reasons, 1. I've never had my name in print and 2. you're the best person I can think of who will answer my questions in a helpful, friendly and unbiased way *(you better believe it kid! – Unc)*.**

*G. Ross, By-Tain, Ross-shire.*

1. Perfectly. The extra memory will allow you to process large documents and write lengthy programs. A second drive is always useful no matter what your intended purpose.

2. Several, not least of which is a hefty increase in price. The A2000 has expansion ports to allow devices such as a PC compatible bridgeboard to be built in allowing it to run programs intended for use on the PC and its compatibles.

3. A utility program allowing you to examine and edit disks and retrieve corrupt files as well as many other DOS-level functions.

4. Don't worry about copying system and other files – it's all easy when you know how (especially with two drives). Just buy and enjoy the system.

5. Yes.

6. A500? There's a lot of life in the old dog yet...

## HELP! QL printing

**1. I am the proud owner of a Sinclair QL and am looking for a printer to go with it. From reading the article in *Express* a few weeks ago it seems the Star LC10 seems to be a very good printer. Is it possible for me to run this with the QL or do I need a special interface?**

**2. At present I am having some trouble getting the QL and its associated Psion software to run as I find the manual virtually incomprehensible. Could you recommend any books which might help me in this respect?**

*Stuart Smith, High Wycombe, Bucks.*

1. You may be able to purchase the LC10 with a serial interface (contact Star on 01-840 1800). Otherwise you need to buy a parallel interface. Try grubbing about in one of the QL-specific magazines on the news stands for a supplier of these ubiquitous devices.

2. The manual is notorious for being incomprehensible, however our very own staff QL owner Andy Storer suggests a visit to your local library, where you'll be sure to discover texts detailing the QL (look out for the name Ian Sinclair – a prolific author of computer manuals who has written the necessary 30,000 words on just about every machine in the known Universe, one or two of them actually readable).

## HELP! TV PC?

**Reading the article headed Screening (*Express* 42) about IBM compatibles and different screen displays, prompted me to think about a question I would like answered, to assist me in deciding which machine to purchase to replace my MSX *(an abacus would be a step up – Unc)*. The question: is it possible to attach a TV modulator to the Amstrad 1512 to enable me to play my favourite pastime backgammon on a larger screen?**

*A. Williams, Sth. Yardley, Birmingham.*

No.

## TIP WIMP out

**I used to be a die-hard supporter of WIMPs and all that jazz until I had an interesting experience with an ST *(oh yes? - Uncle T)*. After having transferred 30 odd Amiga pictures to ST disks I realised that the ST art package would only read in .IFF pictures. Since none of the Amiga pictures had any extensions, I came to the conclusion that it would be a very tedious job indeed to rename them all one by one using tedious GEM!**

**The answer? Simple, I use CLI. First in the line-up is a PD CLI which runs as a desk accessory. It renames files as ????????.IFF. Next comes Michtron's CLI utilities which promptly returned the message 'Wild card operations not allowed with this command'. I also tried the Gulam shell but all I got was an obscure message telling me I didn't know how to use it!**

**In the end the problem was solved by installing an IBM boot block on the disk and then doing a rename using PC-Ditto running MS-DOS. Hope this is of help to other users trying to perform the same feat.**

*Ahmad Alam, Old Trafford, Manchester.*

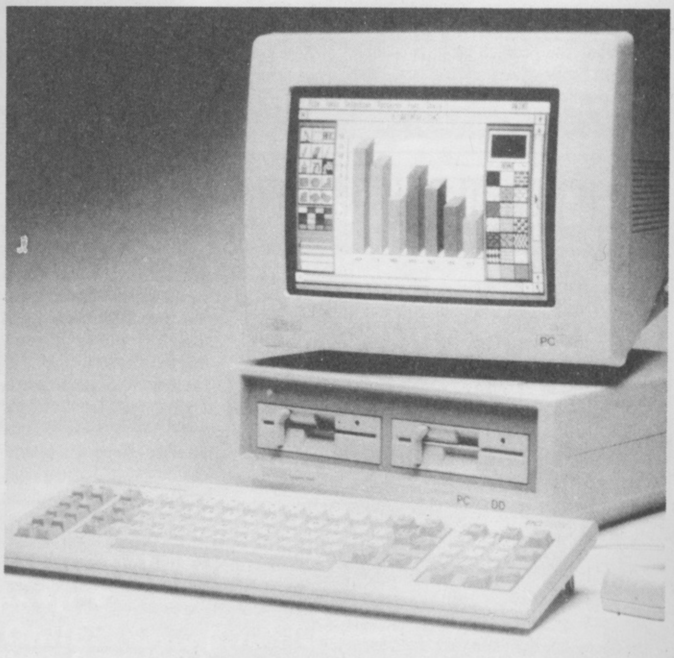
## HELP! Octopus' garden

**I recently dopped into an Oxfam shop and bought an Octopus CP/M computer with two 5.25-inch disk drives and a Panasonic green-screen monitor for £75.**

**I have been happily finding my way around the assortment of CP/M software bundled with the machine but I gather from the manual that there is a combined word processor, financial planner and database available for this computer. Could anyone sell me a legitimate copy of this program?**

*Paul Sutherland, 13 Disraeli Rd., Putney, London SW15 2DR.*

Any Techtippers with the relevant software write this guy direct.



**• Use one of these with a TV? It'd be easier to program your video recorder to play backgammon**

ST CLUB

## Microdeal on show

Last week Microdeal organised a press conference at the Novotel centre so that they could show off their new range of products before the forthcoming PCW show.

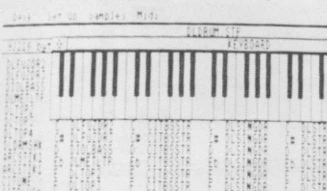
On display was *Goldrunner 3D* and several new music products. The new *Goldrunner* was first started with the objective being to create the most realistic space game yet and as a result the emphasis has been on designing 3D algorithms which will look as exciting as possible and still run fast enough to create an immensely playable game. It has taken nearly a year to do the main coding and graphics with the result being that *Goldrunner 3D* is able to generate 360 polygons per second across eight different missions.

In order to get all the necessary information on two single-sided disks, *Goldrunner* incorporates a special decompacter program which operates at 20K per second as well as a super-fast disk loader able to read 5K of data in 0.18 of a second. Microdeal is considering marketing the compacter and decompacter as a separate package next year.

## Music to my ears

On the music front was *Replay Professional*, the best music package in that price range to date. For £130, you get three pieces of new software – *Replay Professional* (sample editor), *Drumbeat Professional* (sequencer) and *MIDIplay* (MIDI synthesiser). *Replay Professional* includes a new hardware cartridge which contains a 12-bit digital to analog converter that allows four channels of sound to be played simultaneously. The software permits sampling ranging from 4-48KHz as well as all sorts of special editing facilities including the ability to draw your own curve and thus edit out clicks and make volume adjustments. Effects can be performed on samples and midi shifting is possible.

*Drumbeat Professional* will let you sequence drums or other sounds to create your own compositions. A main editing screen lets you position up to 15 sample voices on a scale. The tempo can range from 50-240 beats per minute and up to ten songs may be held in memory at once. Playback can be synchronised with midi so that you can play along with the song.



**• *Drumbeat Professional* edit screen where sequences can be constructed.**

Finally, *MIDIPlay* turns your ST into a sound sampling synthesizer similar to dedicated keyboards which cost hundreds of pounds. Four-channel polyphonic sound is possible with 128 voices held in memory at once.

## Viruses

Over the last few months ST owners are finding that their disks are coming under attack from the Ghost virus. Since this virus will copy itself to five other disks before becoming active, it's easy to be infected and not realise it for some time. The effect of the Ghost virus is to reverse the mouse Y coordinates so that pushing up on the mouse will cause the pointer to move down and vice versa. CRL have recently released a virus killer which does an excellent job of detecting all known ST viruses and killing them from the disk. On top of this it can immunise a disk. When a virus is in the memory of your machine, it looks at a disk to see if it is already held in the bootsector. If it detects that it is there then the virus will not copy itself to the bootsector again. Immunisation works by copying the relevant bytes into the bootsector but without copying the active virus. Thus, when the virus checks to see if it is already held on the disk, it will find the bytes which tell it that it's there and will not copy itself. Immunisation will not work for all viruses but the CRL version will work adequately with the Ghost virus and with the virulent Anti-Virus.

## Modulators

Owners of the Mega range of STs and some 1040s which don't have an internal modulator cannot connect their machines to a TV and are thus compelled to purchase a colour monitor for playing games or using other software which only runs in low- or medium-resolution. However, there is a way around this problem. The London-based Silica Shop stocks a modulator box which plugs into the monitor port providing RF output that can be connected, via a standard television cable, to any TV. This nifty little box costs £59.95. Silica can be contacted on 01-309 1111

## Shopper show

The Computer Shopper Show, due to be held at Alexandra Palace from November 24th to 26th, will this year be transformed into one of the UK's biggest Atari events. Over 100 of the 250 stands will be selling Atari products with most of the big names in the Atari market in attendance. Many new ST products will be released at the show proving that it isn't just a big spree for the box-shifters.

Arnor will be releasing a new database for the ST and a selection of sound samplers will be available from Audio Visual Research. *Sound Master* is a new low-cost sampler with built-in sequencer priced at just £30 and thus set to overshadow *MasterSound* (now handled by Kempston and selling for just under £40). The ST14 sound module, a high quality 12/14 bit sampling system for the semi-professional music market will be there, priced at £245 and the A16 sample rack, providing a CD-quality, 16-bit sound-sampler with MIDI control and sequencer will be unveiled. This will cost £595.

The first ST genlock device, armed with its own processor, memory and power supply will make an appearance courtesy of Digita International. Frontier will also be unveiling a new disk duplication device which allows up to 32 floppy disk drives to be attached to the ST's floppy disk port for £150. And finally, Rombo Productions will be bringing out a VIDI system which will allow pictures to be grabbed from video, costing £100.

**Kimberly Harmagh**

AMIGA BLIT

## ECS mystery solved!

After weeks of confusion surrounding the new 1Mb Agnus chips, all can finally be revealed thanks to AmigaBLIT, a few enquiries and a little help from those nice chaps at Commodore.

For the past few months, several computer suppliers have been selling 'grey import' Amiga 2000s from Germany that are fitted with a new Agnus chip, that allows access to a full megabyte of chip RAM. While this may seem OK, many users have experienced problems with these machines when running certain software packages.

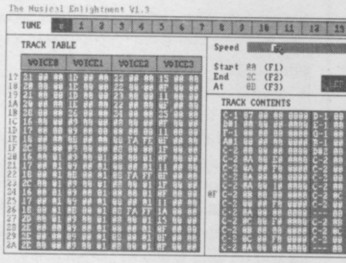
AmigaBLIT reader Bob Saunders of Reading, who is a documentary and film producer and uses the Amiga as a combination video/MIDI music workstation, wrote to me recently to tell me of the problems he had encountered. According to Bob, the Amiga 2000 he purchased was fitted with release 6 of the motherboard (which is 1.5 versions higher than current UK machines) and, in particular, he started experiencing problems with his B2000 when using PD software and Electronic Arts' *Deluxe Paint 3* package.

When I spoke to Commodore about the 1Mb Agnus, it confirmed that not only did grey import machines have the new Agnus, but that they themselves had already started shipping UK versions of the B2000 fitted with the new graphics chip. It will probably take a while before all retailers are selling this latest version of the 2000, but eventually all 2000s sold in the UK will have the new Agnus chip.

Where *Deluxe Paint 3* is concerned, Electronic Arts' became aware of the problem almost immediately after the program's launch and they have since fixed it. The reason for the problem was that the animation module within the program was requesting Fast memory for animations, but only chip memory exists on a 1 Mb Amiga with the new Agnus, and therefore *DPaint* crashed. This was quickly fixed by modifying the program to grab Public memory instead of Fast memory.

## Making music with Grasshopper

UGA, who are probably better known to the vast majority of Amiga owners as suppliers and producers of some of the finest PD software, have expanded their operations to produce commercial products.



**• *Sound Tracker* users will feel instantly at home with *Musical Enlightenment***

Their first release, *Musical Enlightenment*, is a product aimed fairly and squarely at the programmers and users who would have previously used the popular *Sound Tracker* utility to produce music scores for games/demos. *Musical Enlightenment* provides the Amiga user with a comprehensive collections of tools to aid the creation of music scores. The program uses the same, drum machine-like system of composition as employed by *Sound Tracker* and will therefore be immediately usable to anyone used to working with that utility.

As well as song creation capabilities, *Musical Enlightenment* also includes a complete sample editor and effects generator which allows you to either tailor individual samples or create new instruments from scratch. *Musical Enlightenment* is still not finished, but when it is finally available, UGA hope to sell it for the amazing price of somewhere between £8 to £15. For further details, contact Seventeen Bit Software on 0924 366982.

## Network news

Hydra Systems, a relatively unknown name within the Amiga market, has announced the release of their low cost networking system for the Amiga family of computers.

*AmigaNet* is an Ethernet network system that allows multiple Amigas to communicate and to share data. The hardware works on either the A500 or A2000 and provides some of the fastest communications systems currently available. According to Hydra, *AmigaNet* is the only system to allow true Amiga-to-Amiga communication and Amiga file server capabilities.

*AmigaNet* has been designed in such a way as to allow virtually instantaneous movement of data of varying types between any Amiga products. Subject to access permissions, any Amiga on the network can access any other screen, storage device or printer on the system as if it were physically plugged directly into the machine itself. For further info, contact Hydra Systems on 203 471111.

## AMOS release delayed

Time to start sobbing. Mandarin Software have announced that the release of *AMOS*, the Amiga version of their popular *STOS* games writing system, has been put back until January due to the programmer having problems with the Amiga's quirky operating system.

Latest news on *AMOS* is that Mandarin have been flooded with requests by Amiga owners (the number of enquiries is already running into three figures!) for particular additions to the system. According to Chris Payne of Mandarin, they intend making *AMOS* the best it can possibly be and therefore they have been going through the requests very carefully. Already, several additions have been made to *AMOS* based around requests from potential users.

Unlike *STOS*, *AMOS* will have a compiler almost immediately. "Once the programmer has eventually finished *AMOS*, we're not letting him out from in front of his machine until he has also finished a compiler", commented Chris.

## Message port

If you have any comments on any issues raised within AmigaBLIT, or in fact the Amiga scene in general, then why not jot them down and send them in. Similarly, if you have any great tips, tricks or cheats for the latest Amiga software, then I'd love to hear from you.

The address is: JASON HOLBORN, AMIGABLIT, 4 QUEEN STREET, BATH BA1 1EJ.

I'd like to take this opportunity to thank those of you who have send in your idea of the 'Dream Amiga'. When a few more arrive, I'll draw up an overview of what you lot really want to see from Commodore.

**Jason Holborn**

# PC UPDATE

## Input on INPUT

Going back to BASIC, there is another problem which is addressed all too little in handbooks for the language, and in its syntax. If you want your program to request and receive input from a user, the most obvious choice of command is INPUT or INPUT$. This has distinct shortcomings, though, as the command only provides very crude editing facilities. There are also no limits to the length of an entry a user can make (other than the length of the receiving variable), and this can lead to screen corruption and a very tatty result.

What is needed is a custom-written routine which provides the following facilities:

1. The ability to place a text input field anywhere on the screen.
2. The provision of a 'software cursor' within the field, which moves according to user input (cursor keys, etc).
3. Restriction of cursor movement to the limits of the field.
4. User entry of text or numbers and deletion of either, at the cursor with the [Delete] key and left from the cursor with the [Backspace] key.
5. Use of the [Insert] key to toggle between Insert and Overwrite modes of entry. Different cursor shapes to indicate these two modes.
6. The ability to restrict input to certain characters, e.g. numbers only, in numeric fields.

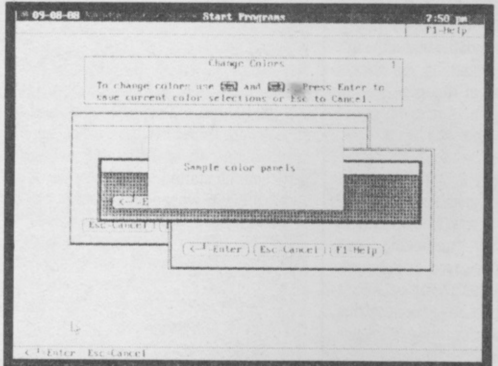
The routine should ideally be in the form of a procedure or sub-routine. Values to pass to it must include the x and y co-ordinates of the first character of the field, the field's length in characters, the type of entry allowed (numeric or alphanumeric) and the variable in which the routine should return the user entry.

This sounds increasingly like the basis for a small competition. If you'd like to send in source code for your best effort, I'll award a decent PC game and publication of the listing to the best entry received by the end of September. All entries must be on disk **AND** printed on paper (handwritten at a pinch). All entries will be tested under *QuickBASIC 4.5* or *BASIC 2*, so anyone using GW BASIC or Turbo BASIC should also be OK. The *NCE* decision is final. Send your entries to *New Computer Express*, 4 Queen Street, Bath BA1 1EJ. I look forward to seeing them.

## Hard disk DOS dumps

It's worth remembering that different versions of MS-DOS are non-compatible in at least one important way. If you upgrade a hard disk machine from one version to another, you are unlikely to be able to use the machine again without reformatting the hard disk - at a low level. It is sometimes enough to use FORMAT to revitalise the format markings on your hard disk cylinders, but in many cases you'll have to use FDISK and HDPREP to reformat it at a lower level.

The error messages you'll get are inconsistent as well. Sometimes you'll get a polite, but annoying 'Wrong DOS version' error, at others your system will refuse to have anything to do with your hard disk, giving a data error. The best way out of this is to back up your hard disk and reformat the whole thing from scratch. It might take you an evening, but the whole machine will run sweeter for it.



To change colors use [illegible] and [illegible]. Press Enter to save current color selections or Esc to Cancel.

• You may want to reformat you hard disk under DOS 4, as you can have much larger partitions on it

## In the JUG

We journos have a hard life, as I'm sure you know. Sweating night after night over a hot beer with only a couple of PCs down the local to take our minds off things. Well, just to give us another excuse for a drink, we can now go along to a JUG meeting. JUG, the recently formed Journalists User Group, is an informal group of journalists who meet once a month to talk about the wonders of word processing in a pub off the Strand. They also put out a very passable newsletter.

One of the main aims of the group is to try and arrange journalist discounts from computer suppliers. And not just for those of us who write about computers, either. The idea behind JUG is to present journalists as a special group worthy of consideration, and they've achieved good discounts from a fair selection of suppliers. Membership costs £10 per year and further details can be had from Simon Atkinson, Design Engineering, Morgan Grampian, Morgan Grampian House, Calderwood Street, London SE18 6QH.

## Synchronicity rules OK?

## Synchronicity rules OK?

Those nice young things at *PC PLUS* finally persuaded me to forgo my lifelong hatred of comms and attempt to send my copy to them via modem. The logic was that they would receive my copy up to two days earlier and possibly therefore on time. They 'even' provided an Amstrad PPC portable complete with modem to send the stuff on, and a program called *PC Anywhere* which they assured me would ring me back so that they would pay for the call.

I was shown how to ring in using the system from one outside line within Future Towers to another. It all worked very smoothly and seemed totally automatic. When I got the machine home and came to send them my first bit of copy, I wired the PPC up to my business phone socket and set the whole thing dialling.

Now it just so happened that the software was still set up for the demo, which of course was a local call from Bath to Bath - no STD code. It further so happened that the first three digits of the *PC PLUS* direct line are the same as those of the private line on the small local exchange I was ringing from. The combination of these two facts lead to the PPC dialling in and trying to connect to the phone at the other end of my office!

**Simon Williams**

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| | | |
|---|---|---|
| PC40 Hard Disc (40mb) | | |
| PC40 Hard Disc - VGA Mono | £1,699.00 | £1,429.00 |
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# SPEX

## Music Cortina

The Spectrum's not exactly renowned for its musical abilities and unless you're a good programmer everything you ask it to play comes out sounding like a wasp in a matchbox, only without the harmony. But now Torchraven Software have released *Music Maestro*, a music creation utility which lets you compose beautiful three channel pieces on the 128, +2 and +3 and nice bleeps and blurbles on the 48K Spectrum.

Unlike previous music construction kits for our machine, the RAM Music Machine and Spectrum for instance, it performs totally without the aid of a hardware add-on but still manages to coax excellent sound quality from the machine's darkest depths. Obviously, the absence of any hardware also means the price is low enough for anyone who wants to indulge in a bit of musical experimentation without having to take out a second mortgage.

Making music with the package is fairly easy even if your previous musical experience only extends to singing along to a Walkman on the train. The program's totally controlled with one key press menus and entering notes is particularly simple with cursor control used in conjunction with various keys to change length and pitch. You also hear the notes as they're selected. For multi-score extravaganzas you can compose individually on all three channels and there are options to turn tone and white noise on and off for each channel as well as a sound to light generator and a host of things you'd expect to find on any music utility worth its salt, like being able to change key, tempo etc.

What you perhaps wouldn't expect to find on a Spectrum package but do get in *Music Maestro* are pitch and amplitude (which basically means volume) envelopes for each channel. These can be altered and saved so you can incorporate them in other work and the authors have provided a natty graphical display which shows you the current shape of the envelope.

No room for further details but going by the demo tunes supplied with the package, *Music Maestro* is capable of producing music that's well worth turning up the sound on the TV for. It's a fine program and if you want a cheapish introduction to making beautiful music on the Spectrum you won't find a better one than this.

*Music Maestro* is available by mail order only at the very reasonable sum of £9.95 on tape and £12.95 on +3 disk. Orders to Torchraven, King House, 60/64 Matthias Rd., London N16 8QD.

### Pokes with a difference

*Here are a few pokes which just for a change don't give you infinite mutant train spotters, limitless ninja guinea pigs or other games related benefits.*

| | |
|---|---|
| POKE 23568,23 | *Unable to list program* |
| POKE 23613,87 | *NEWs program* |
| POKE 23743,80 | *Clears screen* |
| POKE 23743,83 | *Returns screen* |
| POKE 23692,255 | *Anti scroll* |
| POKE 23570,10 | *Disables EDIT key* |
| POKE 23570,16 | *Stops auto listing when ENTER is pressed* |

*Cheers to Allan Garside for sending those in. The same man also offered the following listingette which prints everything on printer instead of the screen.*

```
10 CLOSE #2
20 OPEN #2,"P"
30 REM rest of the program
9999 CLOSE #2: REM last line of
program, press break after CLOSE
#2
```

## Not sick as a parrot

What else but a resounding chorus of "I'm over the moon, Brian" can possibly greet the news that Anco have decided to release a Spectrum version of their acclaimed footy simulator *Kick Off*. This is the game that assorted 16-bit owners have been raving about for the past few months and although that's not necessarily something you always want to take notice of, in this case they're probably right. Mind you, Anco's Spectrum track record up until now has been a tad dubious to say the least, so don't invade the pitch quite yet. The only Spectrum game of theirs' I can even remember is *Maria Whittaker's Christmas Box*. Which apart from being rubbish, totally unexciting and completely sexist was released in February, suggesting a slight miscalculation on Anco's behalf. Still, it's good to see the Spectrum figuring in another software house's release schedule and if *Kick Off* comes close to *Matchday II* in terms of playability and realism we might still be playing it come the World Cup. Expect a full comparison play off in a future column.

## Version saga continues

J R Cleveland of north London writes to say thet despite what I said in this column recently, version 4.0 +3s with all their attendant sound problems, are still on sale. It seems that he's just bought an Action Pack which contained the older machine.

He also points out thet Dixons at least seem unable to make up their mind how much to charge for the action Pack, with prices varying randomly between £200 and £220. The moral: shop around before you buy.

## Even more enigmatic info

Third issue of Enigma, the 128K specific tape 'zine, has just reached me hot off the cassette recorder. No excuses for giving it another plug to add to the collection because it's definitely one of the best independent publications around at the moment. This latest edition looks and sounds very impressive with no fewer than 10 separate soundtracks to listen to while you read the news, chat, hacks and reviews. Recorded after that lot is a 3D ball game, code compressor and border effect routine making this a great package for anyone with a 128, +2 or +3 Spectrum. The tape version costs £1.99 (or £150 + C60 cassette) from 15 Westfield Rd., Inverurie, Aberdeenshire AB5 9YR. Co-editor Hamish Rust has also managed to find a lackey willing to copy and send out +3 disk versions of the mag. Send £3 or £1.50 and a formatted 3" for the disk based Enigma to 17 Lousiville Ave., Aberdeen AB1 6TT (all cheques payable to Enigma).

**Robin Alway**

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# CPC centre

## The great CP/M+ mystery

A Mr Dennis Francis of Reading has written to me with what initially appears rather alarming news.

Dennis sent off in January for a 6128 ROM and CP/M+ disc to upgrade his 464. Sensible chap. Unfortunately, however, although he plugged in his nice new ROM chip with no problems, he still hasn't tracked down a CP/M+ disc. "One dealer I phoned," writes Dennis, "suggested that Amstrad was miffed about we 464ers upgrading for £16.90 instead of forking out the money for a 6128. I wonder if you could find out when, or if, I'm likely to get a legit copy of CP/M+. I presently have the disc on order with CPC Computing, as recommended by yourself."

Oh dear, I thought, and even, Oh crumbs. Amstrad playing hard to get with the CPC again? Well, no. At least, Gary Carter, CPC Computing's (0772 555034) buyer tells me that there has been a delay in the discs coming over from the Far East. I understand, however, that the discs for the PCW have now arrived, and the CPC ones are understood to have been on the same shipment. So Mr Francis, and anyone else in the same predicament, should soon find the postman delivering a pleasant surprise.

I hope.

### Cute, cuddly and rude

*Did you see the story in NCE a few weeks ago about obscenities appearing in Skweek, US Gold's fabulous furry funster-type game? It appeared that in fact the rude ejaculations were the practical joke of some irresponsible Amiga programmer who forgot to remove the offending messages.*

*All this is by way of introduction to a poke for Skweek from the fabulous furry funster-type Mike Wong, whom God and the NHS preserve.*

*In order to avoid what would be a finger punishingly long poke, Mike has devised the following fiendishly clever method.*

*First, buy your copy of Skweek. Insert it in the drive; load "disk," edit 150, replacing the CALL &B010 with END. Then enter RUN and NEW. Now insert poke disk, LOAD "SKWEPOKE (ie the poke below); re-insert game disk and then finally enter RUN.*

```
10 DATA 21,89,be,22,1a,9f
20 DATA c3,10,80,3e,ff,32
30 DATA 74,99,32,82,99,c3
40 DATA 30,72
50 FOR n=&BE80 TO &BE93
60 READ a$:a=VAL("&"+a$)
70 POKE n,a:NEXT
80 CALL &BE80 ●
```

*Secondly this week, a Mr Tony Arnold of Brighton has sent in offers of a large bribe if I could help him with a poke for the old – nay, ancient – Mastertronic budget wizardly combat game Feud.*

*Now to be honest I'd never even heard of this one before, but in the interests of research and collecting that large bribe I raided the files of Amstrad Action (all good newsagents... astounding value... order yours etc) and came across this tape poke.*

*It gives you infinite energy and invulnerability to the herb keeper and Leanoric. Hope it's what you're after, Tony!*

```
1 ' Feud - tape
2 ' by Peter Featherstone
3 ' from the files of Amstrad Action
10 FOR f=&5a00 to &5a1e
20 READ a$
30 POKE f,VAL("&"+a$)
40 NEXT
50 CALL &5a0c
60 DATA af,32,cd,1f,3e,c9
70 DATA 32,57,0e,c3,00,04
80 DATA 21,00,50,11,4c,01
90 DATA 3e,16,cd,a1,bc,3e
100 DATA 5a,32,08,50,c3,00
110 DATA 50 ●
```

*To use it, rewind the game tape to the start, type in the poke and then type RUN and press the small Enter key. Press play and any key and there you are!*

● *Written any good pokes lately? Send your infinite heads poke for Barbarian II to: Steve Carey's CPC Centre, NCE, 4 Queen St, Bath BA1 1EJ.*

## Go on, argue with me!

A letter of a very different kind comes from a Mr John Fairlie of Bristol. "May I say," he writes, and of course he may, it's a free country, "may I say that, despite being a 6128 owner, I find all this talk about Amstrad's attitude to the future of the CPC range to be rather out of place."

Why's that, John? Well, Amstrad, John points out, is in business to make and sell computers and other products. When you buy a CPC you have no more right to the continuation of the range or any supporting rights beyond a guarantee than if you buy a car. Nor do you have the right to have your letters answered or to a free phone service.

"Of course it's nicer to have fellow users, software companies, firmware manuals, experienced repairers, good magazines and so on, and these are more likely to predominate while the range is current. But we have no *right* to their existence.

"If we don't have perfection – the continuation of the firmware manual, a distribution system in Australia, then so be it. I'd have liked a spreadsheet and database on ROM, and we never got that!"

In a sense John is perfectly correct, of course. We have no *right* to these things. But what I and others have been saying for so long is that Amstrad ought to keep the CPC going not for moral but for commercial reasons.

We've been insisting that Amstrad doesn't appreciate what a good machine it has, and that if only it would do a better job of selling the CPC it would do very nicely. After all the machine is five and a half years old, and must therefore need next to no development costs.

What do you think? Is there ever a moral responsibility on a company to keep producing its products? Would Amstrad be stupid and sentimental to do so, or would it be simple commercial sense? Write to Steve Carey, *CPC Centre, NCE,* 4 Queen St, Bath BA1 1EJ.

## Good mo-o-orning Mini Office!

My interest in the hidden messages contained in Database's massive selling *Mini Office II* stirred up one Robin Williams to get in touch. He tells me that the disc protection XOR routine is a number that is really a message, say no more nudge nudge (cryptic or what?).

Next time you're loading up *MOII*, says Robin, try holding down the keys **BUGS** and see what happens. You'll have to be quick, though...

**Steve Carey**

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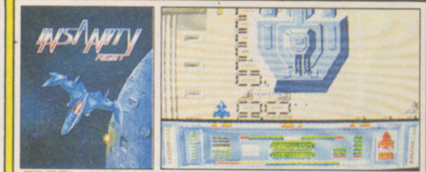
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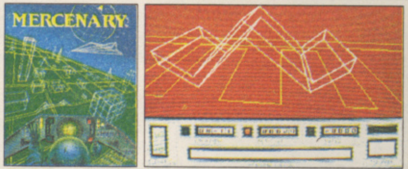
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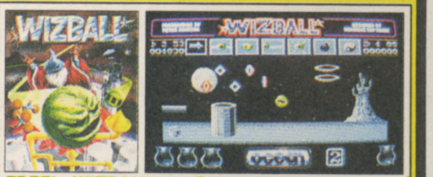
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Do you already own a computer
If so, which one do you own? ..........

## STREET TALK

### BY MIKE DUNN

**FRANCE isn't the first place you associate with revolutionary new approaches to game design, but a French company, Delphine Software, has written a game called *Future Wars: Time Travellers,* which employs a radically different technique for adventure games. The system is called Cinematique, and mixes the adventure theme into an animated game, but without the necessity to type in huge streams of instructions for your character. The Earth is under attack from an alien race, and it's the 43rd century (you'd think they'd have done something about this alien invasion business in the last two thousand years!). Unfortunately the aliens have worked out how to breach Earth's space defence program; they plan travel back in time and sabotage the the defences before they are built! *Time Travellers* is already tipped to be major success on the other side of the Channel; it's being released across Europe at the end of October. Amiga and ST owners can get it then, courtesy of Palace Software. PC owners will have a version to follow.**

**SPECTRUM HoloByte have launched a special mission disk for owners of *Falcon. Operation Counterstrike,* on the Amiga and ST gives you 12 new missions, in a different landscape. There are four types of land enemy to take on; tanks, amphibious landing craft, trucks and trains, as well as the MiGs; the MiG 21 replaces the older MiG 29. One of the most exciting features about the new disk is that it allows the user to connect to another computer through a modem or direct link, and play a head-to-head dogfight. Of course, you'll need the old Falcon program to run these new missions; the disks will retail in the U.S. for $24.95 – no UK details as yet.**

# TAME GA

"For the IBM **PC** compatible versions of ***PIRATES!,*** when in a sword fight, select a rapier and keep slashing low (always good advice!). Winning should be no problem.

Here are the passwords for the computer terminal on level five of ***TRANTOR:***

Kempston, Joystick, Spectrum, Computer, Keyboard, Sinclair, Software, Cassette, Graphics, Terminal, Hardware, Controls, Printers, Warriors, Wargames. Collect the three letter code, carry on to level 8 and enter it."

***DANIEL KEEBLE,*** *Chelmsley Wood, Birmingham.*

*-And apparently Daniel, it is true that WD-40 will work on used printer ribbons and rejuvenate them (so I'm told)!*

A couple of tips to make **BBC** owners feel better;

"On ***SPELLBINDER,*** adding fleas to the end of each spell makes it more powerful.

On ***EMPIRE STRIKES BACK,*** pressing F6 then F0 on the title screen gives you infinite shields."

***D. LANGTON,*** *New Southgate, London N11*

And a few for the **SPECTRUM;**

***"EMLYN HUGHES' INTERNATIONAL SOCCER;*** on the easy level, try tackling the oppenents when they kick off, take the ball up to their edge of the centre circle, hold down "lob" for about one second, then release and watch the ball fly over the goalie's head and into the back of the net! If you have the opponent's goal on screen, take the ball up close to their goalie, stand about a character square away, then do a straight forward kick, and the ball shouldget past him. Also, be wary of some combinations of control keys; the wrong ones can make your players spin round before you can control their actions.

- ***RENEGADE III;*** on level 1, don't stay near the top for too long, and don't try to jump the wider rivers or any of the pits with more than two spikes in them, because you're unlikely to make it!
- ***TETRIS;*** Instead of playing on level 0, try levels 1 or 2, as the speed is more or less the same, but the points are higher. Don't wait for the thin yellow block as it probably won't arrive; this game tends to favour the oddly shaped magenta ones. Leave the backgrounds off; they're annoying.
- ***MONTE CARLO CASINO;*** despite the inlay telling you that the objective is to get a million dollars, the game doesn't stop when you succeed! On the sub-games;
- ***ROULETTE;*** great fun, although my copy tends to like 2, 5, 23 and 35. If any number in the middle row (2,5,8,11...) comes up, keep betting on it until it loses.
- ***PONTOON;*** Add ten to the dealer's card and if you've got less, then buy or twist. Although the inlay says that a five card trick should beat pontoon, watch what happens when you get a five card trick and the oppenent gets pontoon!
- ***POKER;*** never gamble more than half your cash minus $6000.
- ***CRAPS;*** this is boring; watch two tiny black squares fly around a green block and come up so as you lose nine times out of 10. Wow.
- ***FRUIT MACHINE;*** where's the million dollar jackpot, Codemasters? The highest win possible is only $20,000.
- ***STREET CRED FOOTBALL;*** If anyone in the world is having trouble winning 25-0, here's some tips;

Don't change the payer positions. Take the ball off the computer player at the start by challenging him diagonally up and left. Go straight towards the goal, up and right, until you are centered on it, and then shoot. If you go too near the crates which mark the goalposts, then the goal won't count even if it looks like it went in.

- ***FAST FOOD;*** Always start on level one; by the time you get to level twenty

## HIT LIST

### TOP 5 GAMES

We don't need this Gallup chart business! These are the *really* good games of the last few months. Cue *New Computer Express'* very own guide to what's worth buying...

**1. GUNHED**
Hudson Soft • PC Engine only
Oops! Don't know what happened to this last week, but the mighty PC Engine shoot-'em-up is well and truly back at no. 1.

**2. BLOOD MONEY**
Psygnosis • Amiga, ST. C64 and PC versions under development.
The ST version of this mega-hit Amiga shoot-'em-up has arrived. It sounds good, it looks good, it plays brilliantly!

**3. NEW ZEALAND STORY**
Ocean/ Spectrum, C64, CPC, ST, Amiga
Arrow-shooting bomb-dropping kiwis go wild; a direct conversion from the coin-op machine.

**4. APB**
Domark • Spectrum, C64, CPC, ST, Amiga
Cops 'n' robbers at its best; nick all the lawbreakers in this accurate conversion from the Tengen arcade game.

**5.CARRIER COMMAND**
Rainbird • Spectrum, CPC (disk only), ST, Amiga
A great strategy/arcade combination which lets you take total control of a whopping great aircraft carrier riding the ocean waves.

## TOP 10

### GALLUP CHART

The 10 best-selling games according to Gallup

**1 INDIANA JONES AND THE LAST CRUSADE**
US Gold's finally taken the top spot
**2 ROBOCOP**
Long-standing chart topper toppled
**3 NEW ZEALAND STORY**
Cutsey-cutesy kiwis
**4 CRAZY CARS 2**
New entry for Titus' racing game
**5 DRAGON NINJA**
One of five Ocean titles in the top 10
**6 BATMAN**
Riding the crest of the hype
**7 OPERATION WOLF**
Mayhem, violence and destruction
**8 SILKWORM**
Virgin's classic
**9 LICENCE TO KILL**
James Bond struggles on
**10 DOUBLE DRAGON**
Oriental violence from Melbourne House

## DO YOU OWN THESE GAMES?

- **APB**
- **XENON II**
- **QUEST FOR THE TIME BIRD**
- **XYBOTS**
- **RIK DANGEROUS**

We've taken five of the best recent releases and declared war on them! *Express* needs you to help tame them; have you discovered a hidden cheat mode, a poke, or a bug that makes the game easier? Or do you have some tips to share with everyone else?

If you've got the info, send it to;

Tame The Game
4 Queen Street
Bath
BA1 1EJ.

The best game tamers from each issue win a prize; don't forget to tell us which computer you own!

We're also going to start a high score section to give you something to aim for, but we need some good scores from you - send us three tips on how you managed your score, and then achieve fame and er, more fame in the Game-

# GAME

you'll have 6 or 7 lives (if you're any good, that is!).

• ***MATCHDAY II;*** Go up to the goalie and shoot diagonally away from him; he won't save it."
***A.R. BEEBE,*** *Hinkley, Leics.*

"On the **C64** version of ***NEW ZEALAND STORY,*** hold down the TRY CHEATING keys (including the space) the border should turn grey. When you start the game you'll have infinite kiwis and the ability to get to the next level by pressing "<" (LEFT ARROW)"
***KENDAL MAY,*** *Faversham, Kent.*

"When playing ***SILKWORM,*** a good way of getting the "kill counter" to go down faster is to use the helicopter to shoot the jeep when the jeep is carrying the shield.

➤ In ***LASER SQUAD (64),*** when face to face with the battle droid in a single thickness passage, grenade or shoot (cannon only) at the wall next to the droid and you will do more damage than shooting directly at him."
***JOHN MARSHALL,*** *Emsworth, Hants.*

Help for **AMIGA** owners with a copy of ***RETURN OF THE JEDI...***
"On level one, if you miss a bike, do some evasive action, and it will disappear in a few moments. Never fly in a straight line if you're being tailed. The first level of the Death Star is easy enough but on later levels, you should accelerate the Millenium Falcon before the falling beamhits you. On the walker levels, destroy the logs for extra points. If you stay on the far right the rock throwing Ewoks will miss you. When you come to the two enemy walkers, blast the left one and move past; it's best not to try for the other one, as you'll probably get destroyed."

And for those with ***CAPTAIN BLOOD;***
"If you try to land on a planet with defences and the missles are coming right at you, stop and go to the bottom of the screen; they will retreat. This can be repeated until you reach the ravine."
***ROWAN BARRETO,*** *Brixton, London SW2.*

On **C64** ***THUNDERBLADE,***
POKE 4159,200 for 200 'choppers and SYS 4096 to restart.
On ***OPERATION WOLF,***
POKE 33359,165 for infinite energy and SYS 16963 to restart
On ***DRAGON NINJA,***
POKE 43123,0 for infinite energy and SYS 2016 to restart.
***RYAN DONAGHEY,*** *Co. Tyrone, N. Ireland*

Select your mission on **AMIGA** ***NEBULUS*** then type on the title screen "HELLOIAMJMP" (no spaces); this gives you infinite lives and lets you select towers using the function keys F1-F8.
***CHRIS CLIFFORD,*** *Neath, West Glamorgan*

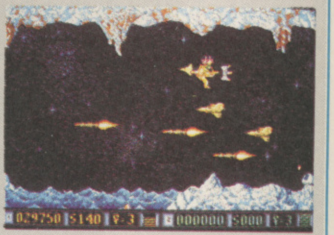
---

GAME of the WEEK

# BLOOD MONEY

**Blood Money was an instant classic on the Amiga, now Psygnosis' top shoot-'em-up is out on the ST**

**From Psygnosis • ST version reviewed**



**GAMEPLAY •** It has to be said; *Blood Money* is one the best shoot-'em-ups we've seen (not counting the PC Engine games!). Any sort of scenario or plot would almost be unecessary in a shoot-'em-up of this calibre, but nonetheless the inlay is funny and manages to twist out some sort of story; you're on an alien safari have to shoot everything that moves! There are four levels, which range from the planet Gibba, which you see from a helicopter, to the planet Snuff, which we haven't seen at all yet! Every so often there's an equipment store, which allows you to buy add-on weapons for your vehicle, be it a jet pack, submarine or whatever; dead aliens leave behind the money necessary to get these goodies.

| VERSION | PRICE | DUE OUT |
|---|---|---|
| Spectrum | No version planned | |
| C64 | ????? | November |
| CPC | No version planned | |
| ST | £24.95 | Now |
| Amiga | £24.95 | Now |
| PC | ????? | November |

**GRAPHICS AND SOUND •** The soundtrack that accompanies *Blood Money* is fantastic; it adds atmosphere and gives you something tuneful to listen to into the bargain, but we found that the game was equally enjcyable with the FX option, as these too are very good. On the visuals too, it scores highly, with excellent use of colour, some superb animation on the aliens, and very smooth multi-directional scrolling. It's worth playing just to listen to the tune and watch the enemies float by!

**OTHER VERSIONS •** The only other version that currently exists is the Amiga one, and this is of the highest standard. In fact, the ST version is remarkably similar; it imitates the effectively. Converting a game like *Blood Money* onto other formats is going to take a considerable amount of work, but Psygnosis are planning to release it on the C64 and PC in November. These should be well worth watching as they'll either be very disappointing or something that will take both

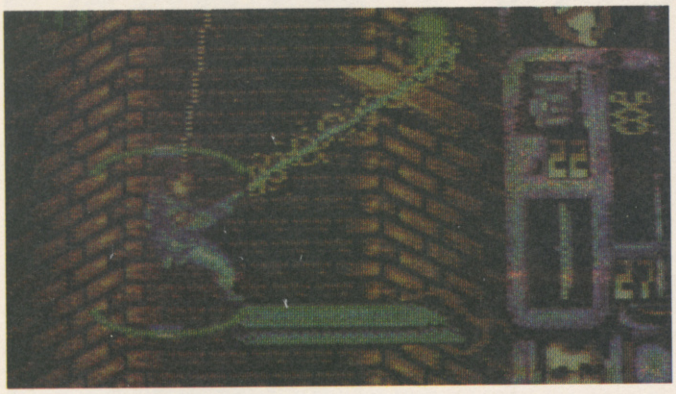
**VERDICT** ★★★★★
An impressive product. Slickly presented, in a large colourful box with an informative and amusing manual, detailing one of the most addictive shoot-'em-ups I've seen outside the console market; *Blood Money* is not a game to miss.

## NAME BEHIND THE GAME

**The original Amiga version of *Blood Money* was written by David Jones, and the graphics designed by Tony Smith. The ST version, on the other hand, was taken on by Wayne Smithson. Previously, he had done *Skyrider* and *Baal* for the ST; he claims to prefer working on original games, as opposed to conversions, but the ST version of *Blood Money* is proof that he can do an excellent job with both! It seems that the big problem with the conversion of *Blood Money* was the graphics. Psygnosis weren't expecting all of the material to make it over onto the ST; on the Amiga, hardware routines were used to move the sprites around. On the ST, however, no such routines exist, so Smithson had to tackle the problem of writing the sprite handling routines himself. This special routine to control the graphics resulted in all the sprites for each level being held in memory together; the only use of the disk within levels is for the big aliens at the end. Scrolling also presented a big problem, but by using a special technique which holds three screens in memory at a time, he managed to resolve it. His latest game is provisionally called "It Can't Be Done", and the scrolling on this is remarkably fast!**

# FIRST PEEK ....

## GHOSTBUSTERS II



An appetite-whetting shot, above, of *Ghostbusters II* from Activision. It's being programmed by Foursfield (famous for *Timescanner* and *Incredible Shrinking Sphere*), and should feature four stages taken from scenes in the film. The CPC version is the one featured in our screenshot, but it'll also be released on ST, Amiga, Spectrum and C64 in December, which is when the film goes on general British release.

*Ghostbusters II* achieved remarkable successes in the box-office: it grossed more than $10 million in its first day of release in America, beating the record previously set by *Indiana Jones and the Last Crusade* (a mere $7.9 million!) Very few people can possibly have missed the original 1984 classic, which featured among others, Dan Ackroyd (The Blues Brothers, Trading Places, Dragnet and millions of others) and Rik Moranis (Little Shop Of Horrors), but in case you did, it's about a team of friends with an interest in the paranormal who set themselves up as a ghost disposal service and eventually avert a major spook disaster in the city.

The original *Ghostbusters* game is one of the biggest selling computer games of the last few years, having sold more than two million copies; it looks as if the sequel might perform even more impressively.

## ONE-LINERS ● ONE-LINERS

● From Firebird in the future (about October) is a game called *Quartz* on the ST and Amiga; this will be followed by *Oriental Games* on the Spectrum, C64, Amiga and PC in November.

● Talking of PCs, there's now a version of the excellent eight-bit Firebird platform game *Rik Dangerous* for all those fun-loving IBM owners.

● Also on Firebird's release schedule are three promising arcade conversions; *Action Fighter, P-47* and *Rainbow Island*, on all formats. *Rainbow Island* (not to be confused with the Earth-saving Greenpeace game *Rainbow Warrior!*) should be well worth seeing; for anyone who doesn't already know, it's the follow-up to *Bubble Bobble*, and hopefully will be even better than that ageless classic.

●*Pirates!*, an excellent strategy simulation of "high seas adventure" (something like that anyway) is coming up; to be released on the ST and Amiga, (already out on the PC) by Microprose.

● And while on the subject of strategy games, there is an ST version of *Red Storm RIsing* out now, with an Amiga version following in December.

● Interesting things happening on the Style and Status label include *Xenophobe, Tower of Babel* and a big strategy game project called *Mid-Winter*. This will be designed by one of the team responsible for the epic *Carrier Command* , and will be set in a second Ice Age... The graphics are apparently going to be stunning, and we can expect to see them in November.

● PC owners who have felt left out with all the fuss that has been made about *Starglider II* and *Carrier Command* don't have to worry any longer; Rainbird have got versions of each on the way for them. *Carrier Command* will also come out in October for the C64.

● Ready for release on October 18th is Domark's *Pictionary*, the computer version of the arty board game, on all formats, to be followed by *Toobin'*, on November 8th. This is conversion of the Tengen coin-op in which lots of jolly little kiddies go racing down a river on inner tubes and fall in and get very wet. Ha ha. *Hard Driving*, again, a Tengen arcade conversion on all formats, is due out on November 22nd, well in time for Christmas.

● Rainbird have a shoot-'em-up called *Verminator* coming out, as well as their versions of *Wierd Dreams* on PC, 64 and Amiga. There's an adventure called *Epoch* due out in November on the Spectrum, C64, CPC, ST and PC, and the deviously and wittily titled *UMS-2*, (the follow-up to UMS-1) will be on the shelves at the end of the year on PC, ST and Amiga.

● Two interesting releases from Electronic Arts, which will be available as you read this, are *Populous: The Promised Lands*, a data disk for the ST and Amiga for £9.99, and the CPC version of *Skate or Die*, for £8.99 cassette and £14.99 disk.

●*Strider*, from U.S. Gold, is ready for a mid-October launch; this will happen on the C64, Spectrum, ST and Amiga. There's also a new SSI game coming up; *Dragons of Flame*, and a conversion of the Capcom arcade *Ghosts and Ghouls*.

● Michael Jackson's fans will doubtless be overjoyed to hear about the computer game *Moonwalker*, which is being programmed by Emerald Software.

● Last bit of information; Microprose have got a space strategy game under way; we don't know much about it yet except that it'll be out in January-Febuary of next year, and it'll be a full blown affair with a big fat manual and all that jazz, so it should be quite an interesting product.

# MINI REVIEWS...

## VIGILANTE ★★★★

**SEGA • £24.95**

ARCADE
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VIGILANTE

Yep, Maria, your beautiful girlfriend, has been kidnapped again. She must be getting really annoyed being abducted every 10 minutes by various gangs of baddies! Time to don your rescueing shoes and go get after her... This scenario has been seen a million times before but considered independently of the other games of its type, *Vigilante* isn't so bad. The soundtrack isn't the best we've ever heard, although the game is graphically very well presented. We found it generally likeable, with no significant faults other than the unoriginality. The five rounds offer a variety of oppenents, giving *Vigilante* its fair share of content; it's a colourful and violent game which most Sega owners ought to think about buying!

## SKATE OR DIE ★★

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AMSTRAD
SKATE OR DIE
BY MICHAEL KOSAKA, STEPHEN LANDRUM & DAVID BUNCH

There are five events in *Skate Or Die*. Statistically surely at least one of them should be alright. Realistically, however, none of them are. The main menu is badly designed and awkward to use, and unfortunately it doesn't get any better from there.

Graphically it's very disappointing; the sprites are small, and even on the few events which are in colour, it's not used to any great effect. The other versions we've seen weren't stunning, but they weren't as bad as this. A few of the events have a tiny amount of playability attached to them, but we don't think it's the sort of game you'll want to come back to repeatedly.

Quite a surpise from Electronic Arts, actually, because a lot of their product has been of a high standard recently.

## ● Play back

### Your views on the latest software – call 0225 444439

"*Timescanner* is absolutely brilliant on the CPC! By the way, when is *Carrier Command* out for the CPC?"
***NICHOLAS HAWORTH**, Duxford, Cambridge*

**• *Just in case you missed last week's one-liners,* Carrier Command *won't be released on cassette for the CPC but disk versions should be out now for £14.95.***

"I don't like the Amiga; it's too gamey, and the operating system is so awkward; it may be technically better than the ST, but for the price (£400 compared to an ST I saw in Coventry for £150) it's one helluva rip-off. Instead of buying one of these (if I was going to) I'd leave it and wait for the next generation of micros."
***THE INVISIBLE FLY,** Buzzington, Buzziz.*

"*Gunhed* may have amazing visuals and sound, but I reckon the Amiga could easily handle that; just look at *Xenon II*."

"I think that for £9.99 *World Class Leaderboard* on the Amiga is an excellent buy."
***CRAIG HALL,**Shybrook*

"I know why there's a world-wide chip shortage: Brigitte Nielsen. Also, death to pirates!"
***DARREN ROBINSON**, Carlisle*

"*Gemini Wing* on the Amiga is far too easy; with two players, you can finish it on your first game."
***DAVID BROOK,** Guernsey, Channel Islands*

"*Batman* is sooo cool; you just have to go out and buy it. I'm going to get a SAM Coupé, because the games on the ST are useless."
***SIMON THOMAS,** Llanrysted*

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## BEEB BOX

### Educated guess

Many of the best educational software houses have been quiet for some while now. The reason for this low profile can be encompassed in one phrase, 'development time'. In other words they are quietly beavering away writing new programs, or more likely conversions for the A3000 series. It will be interesting to see whether some of the old favourites such as *Snatch* from 4mation make it over to the new range of machines. Certainly there is still a yawning gap for quality educational software in the Arc market. Unfortunately good software takes a long time to write, so I will be surprised if anything substantial comes out for that machine much before Christmas.

### Take over bid

In the Beeb market however, there has been a flurry of activity with software house ESM announcing its takeover of the *Advanced Folio* word processor. This is not a new product, although an Asian language version and more fonts have been made available. The new publishing agreement takes effect from January 1990, which coincides nicely with the BETT show. *Hands-on Spelling* is completely new though, and should be available by the time you read this article. The program is aimed at very young children and comes complete with a Concept Keyboard for £27.50. For those of you with short memories, a Concept Keyboard completely replaces the standard item, plugging into the user port. The child then touches a picture rather than pressing a key.

### Modem hint

If you've just purchases a modem, and are about to move into the comms world here's some advice on how to keep that phone bill to reasonable proportions. Do as much preparation as possible before logging-on. It may take some time getting used to, but don't forget that every second you spend on line costs money, loads-a-money.

**Andrew Browm**

### On the telly

*Remember telesoftware? Cheap programs freely available to all. It all seems a bit quaint now, like flower power or Lesley Judd on Micro Live. With Micronet all but pulling the plug, and the BBC withdrawing from CEEFAX telesoftware altogether, the idea seemed to have been well and truly mugged. Teletext adapter owners in particular are absolutely furious. Let's face it, who would want to pay £112 for a paperweight. But all is not lost! Here comes El SID (sorry about the pun) with loads of good software for all BBC micro Users. Well at least that's their story. I do have faith in Philip Colmer's ability to organise the system, but I somehow doubt whether he's got the time or the backup.*

## ARCHIMEDES LORE

### Kirk to Enterprise

One of the nicest little gimmicks on the Apple Macintosh is its ability to assign sounds to the various actions of the computer. So, if it takes your fancy, you can have different noises for errors, disk eject, disk load and the like. These noises can be digitised noises or 'soundbites' and there are some interesting libraries available in the public domain.

Looking at the *Voices command on the Archie, it is certainly possible to load a different sound for the default beep on the machine. You can do this quite simply through the !Configure program and so install an annoying snare drum instead of Acorn's subdued WaveSynth beep. If you have Voices other than the default loaded, you can also, presumably, assign them to channel 1, and hence the system beep.

What I would like to know is whether you can turn digitised sounds into Voices and load them in this way. Also, is it possible on the Archie to assign different noises to different effects. Can we too have vomiting noises when we eject a disk, and phrases such as 'Oo...it's so big!' attached to the insertion of a new one?

### Impression dongle

Computer Concepts DTP/word processor *Impression* is close to release. Charles Moir, the company's MD, was keen to stress that the copy he promised me was pre-release and had some missing bits, but hoped that a production version would be out by the PC Show at the end of the month. CC has a stand as part of the Acorn entourage at the show.

Charles also confirmed that *Impression* will come with a protective 'dongle' attached to the printer port. He feels the extra defence is necessary as the product won't be available on ROM, as were CC's best selling BBC products. We'll have to hope it doesn't interfere with other Archie programs, and that it isn't cracked too quickly. CC has made a huge investment in *Impression* so for all concerned let's hope it's a success.

**Bertrum Carrot**

### Plastic Mach

*Having sung the praises of Mach Technology's wide range of goodies, I have to join writers in other Archie mags with a note of caution. Despite having asked on several occasions for more details of their products, I have yet to receive any documentation at all. Mach wasn't at the Acorn User show in July and I haven't heard of no-one who actually uses a Mach Technologies hard disk, 286 podule, memory upgrade or any of their software.*

*This could be coincidence, it could be a bit of pre-advertising, or it could be suspicious. Whichever way, it's worth waiting for a review before parting with cash. That way you'll know the stuff exists.*

## Q corner

### QL adventurerers forum

I've just received issue 7 of Richard Alexander's QLAF newsletter.Its 36 A4 pages contain an interesting mix of articles.

I especially liked Jean-Yves Rouffiac's account of how he developed an adventure game called Dreamlands. QLAF also contains several reviews, pages of hints, and news of forthcoming games from CGH Services, publishers of QLAF.

Richard also maintains a library of PD software for the QL. Several new programs developed in Germany, and translated into English, have been added recently.

These include a set of maths routines, a calender program, a QDOS 'shell', and a window utility.

A four issue subscription to QLAF costs #5 from CGH Services, Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA.

### A lack of precision?

If you need more precision than is available from the built-in SuperBASIC maths routines (about nine digits, with seven displayed), with fast program execution, I would advise the use of Prospero Software's excellent ProFortran compiler, which offers up to 16 digit accuracy.

Prospero is on 01-741 8531.

On the other hand, if you don't speak Fortran, and execution time is not particularly important, why not use the Archive programming language, which came free with your QL? The Archive language is very easy to use, and although Archive programs are not particularly fast, you get 14 digits of precision, which is probably plenty for most applications. Archive lacks arrays, but you might be able to manage without them.

### PDQC and C-Port

The PDQL implementation of Lattice C for the QL is progressing quite well, they tell me. It has been on beta test for about a month, and the various bugs that have come to light are being eradicated.

Because the standard QL linker is very slow, a new, faster one is being developed. The price of £79 is considerably more than the provisional price of about £60 I quoted back in June, but is still good value, with Lattice C for the ST ( a much bigger market) costing nearly £100.

C-Port, PDQL's SuperBASIC to C translator program, has been considerably enhanced, and now produces code that is ANSI and Lattice compatible. C-Port also costs £79.

PDQL is on 021-200 2313

**John Torofex**

### What's in a name?

*Have you ever wondered why Sinclair used AH, JM, JS, etc, to identify the different versions of the QL ROM. It used to be thought that they were the initials of the machine's designers, but they are in fact the initials of sundry Sinclair tea ladies, the chauffeur, and others of that ilk.*

## SECTOR 64 SECTOR

### Music lovers

A new music talent based in Darlington has come to town adding to a long string of musicians. These guys call themselves Sonic Graffiti and are made up of some experienced musicians and programmers from the great old world of CNET. Andrew Lumley (alias Yat) put together a nifty music player earlier this year and with fellow CNET Giant Deek (the music guy) they're doing some pretty hot stuff with the C64 for some games titles at the moment.

Softography. *Moving Target* (Players Premiers) and *Cobra Force* (Players Premiers) Plus many more on the way I'm sure. Both games are reviewed in Sector 64 issue 43. Here are some other commercial musicians involved in software sound tracks: Robb Hubbard, Martin Galway, Dave Whittaker, Jas. C. Brooke, We MUSIC, Tim Follin, Jonathon Dunn, Demon, Maniacs of Noise, Danish Music Company, Fred Gray, Musicon design, david Dunn, Martin Walker, Chris Huelsbeck, Hager (now under his own name of Wally Beben/Sounds Digital).

And that's without listing all the thousands of amateur musicians.

### Advice

We have had quite a few letters from a number of people asking how to get into the games industry, what to look out for and what companies are looking for you.

Most games companies nowadays do not publish games written by the curtain freelancer who has just finished writing the game from home without showing anyone to get a contract, unless it is totally amazing of course. But you know as well as anybody, a large amount of software is awful!

Prospective games programmers begin by converting everything i.e. coin-ops to C64, other micro to C64 or design brief to C64.

When sending in a piece of software to a company, they mainly look for game routines i.e. scrolling, sprite formation, routines that make creatures walk and attack in different ways and with all the fighting games around in the arcades at the moment it's wise to include fighting formations, with maybe you fighting some big dragon with your sword. Basic fact, knock together a nice little game to show you've got what it takes.

A lot of 64 games now have to follow a curtain standard, so the best direction to travel in is write a scrolling colour backdrop with multiplexed sprites overlaid for a hi-res and 16-bit fill.

If you're going to send your game to a company make sure that yourname is all over it. Make a back-up then post the game to your self without opening when receiving it, is a good way of proving that it's entirely your own work.

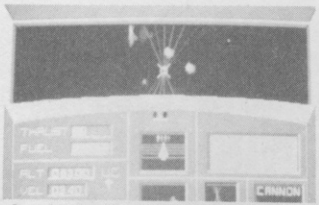
Don't despair if you get an instant rejection – some companies even have a policy of never opening games sent to them in case they are later sued for breach of copyright if they later come up with a game of their own on similar lines.

**Ian and Mick**

# PCW PATCH

## No sexism please, we're PCW owners

Artronic has put together a compilation of games for the PCW. For £14.99 you get *ACE* (a flight sim), *Formula 1* (a racing game), *Sky War*, and a 'very tame *Strip Poker*'. Given the high percentage of female PCW owners and the generally non-sexist and mature ownership, I can see the *Strip Poker* taking off like an Ilyushin. But a very good value bundle well worth a look – nice to see people still supporting the leisure side of the PCW. Some of the graphics are quite impressive too. Available from Artronic on 0423 525325.



• Stunning graphics on Artronics' compilation. Fortunately they didn't send us a shot of the *Strip Poker*

## Be a columnist!

Here's how to put text into columns in *LocoScript*. You can't really do it on screen but you can do it on printout by printing first the left then the right hand side columns on the same page.

Prepare your text as one long column. Print each page separately ('print some pages' from the print menu) and set the left offset to 40 for each even page, 0 for each odd page, putting even and odd on the same sheet. Your text is easy to edit and it comes out looking very smart.

## Not the elite

Interested to see that in *Beginners* last week on page 11, Rod Lawton's archetypical buyer of the PCW was 'Lady Eleanor Ponsonby-Smythe'. Nice to think the PCW has an aristocratic touch, but come on Rod! At £500 for a complete (medium-) hi-tech word processing and computing setup it's a machine for The People, even plebs like me (325,807th in line to the throne... unless I can find a Princess to marry...)

## Hold it

Barry Tucker bought a PCW from Dixons in St Neots, but the screen was wonky at the top. Dixons keep replacing the monitor but haven't addressed the problem, says Barry.

This is a frequent complaint and the solution which always seems to work is just to fiddle with the horizontal and vertical hold controls at the back of the monitor. If this doesn't work, go to a TV engineer.

**Basil Pigg**

### Pigg Book of Records

**Most laboured definition**

*Hope this description of the END command found in a standard university text on Fortran is clear enough for you.*

*'The command END', it says, 'consists of the letters E, N and D, each occurring once only, and in that order'.*

# MSXTRA

## High quality

The quality of the games now being made available to the MSX user seems to be improving all the time, if the latest issues from Melbourne House are anything to go by. I have already raved over MSX *Xenon*, and can now tell you that Melbourne House's *Terrorpods* is equally good, although the game has virtually nothing in common with the former title, apart from a certain amount of hunting and killing.

Briefly the game involves the destruction of marauding Terrorpods that have taken over sectors of a mining colony, and the collection of Terrorpod components from each sector for delivery to the federation. Fuel and explosives can be collected from mining units that are scattered around the colony, your DSV being able to "lock on" to these units. Clear one sector of the colony, and collect the Terrorpod component, and you can then proceed to the next of the six sectors. The Terrorpods in each sector are destroyed by well aimed laser shots, the first disabling the Terrorpod, and subsequent shots reducing its power until it has zero energy and is destroyed. If you leave a Terrorpod partially damaged, it will regenerate, and start destroying the mining installations once again. Your DSV has the power to repair mining units that are damaged, but take care, you can soon run out of energy yourself, and the Terrorpod mothership can then easily pick you off and destroy you.

That's the game, "what's it like to play?" I hear you all cry. I found *Terrorpods* very interesting and involving, as there isn't really anything else like it on the MSX. Graphics are very good, with a 3D perspective being displayed as if viewed from your DSV cockpit. Although little use of colour is used in the playing area, it is mainly black on green, colour is used well on your display panel. The scrolling and movement of on screen graphics is well done though, with realistic movement of your vehicle. Sound effects are perfectly adequate for this type of game, after all with strategy games like this, music etc is too distracting. I liked *Terrorpods* a lot, and am sure you will too.

## Loading problems

Many MSX 2 owners have been finding that quite a few MSX 1 tape based games will not load and run on their machines. I think I have the solution. If you purchase a 64k expansion rom, such as those available from D L Chittendens, and you then plug the device into the cartridge port of your computer, most MSX 1 games will load and run. As a 64K expansion will set you back about £50, it's an expensive way to make your software run.

## Mice magic

The NEOS MSX mouse works very well on the Philips MSX 2s as it is £49.95 including graphics software as opposed to £90 for the Philips device. The NEOS mouse worked with all thee Philips home office style software and is robust and well-designed device.

**Keith Neale**

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**30** Pocket PC
**40** Handy sewing kit to mend pockets
**50** Calculator watch
**60** Database watch
**70** Occam reference guide
**80** Byte magazine open at page 327
**90** Anorak
**100** NHS Spectacles held together with Elastoplast

## Ten things which we're still waiting for

**10 Atari's TT**
*April 1985, Sam Tramiel tells the computer press at Hanover (launch of the ST in Europe), that the TT would be ready for June that year. We're still waiting...*

**20 Dick Special**
*After writing the brilliant Ant Attack on the Spectrum, Sandy White shows a game called Dick Special at the PCW show 1987 on the Amiga. It wasn't complete then...*

**30 Atari CD ROM**
*First mentioned in mid 1985, still something you can't see in your average computer shop...*

**40 Atari SH317 Hard Drive**
*A 10Mb hard disk for all we poor folk who can't afford the big ones. Was meant to be £400 in 1985. How about one now for under £200?*

**50 Atari PS3000**
*A hi-res colour monitor, which was meant to include a disk drive within it at some stage...*

**60 Atari SDM124**
*A daisy-wheel printer for the ST, which met the fate of many an Atari product.*

**70 Video Vault's Spectrum emulator for the CBM64**
*Yup! It was in the early months of 1984 when Video Vault said that they could make your 64 run all those Speccy proggies for a mere £13.95.*

**80 Bandersnatch for the QL**
*Originally meant to be a mega-game for the Spectrum, after Imagine folded Sinclair purchased the licence.*

**90 Elite II (or whatever the sequel to Elite will be called?)**
*Well? Where is it? We've been waiting a long, long time...*

**100 The ST emulator**
*An ST emulator for the CBM Amiga announced in mid 1987. A mere snip at £15 + £5 towards one of the six charities, from Al & R Limited. Yes, it was a lot of air, wasn't it?*

***Ahmad Alam***

## Ten stylish pieces of kit to be seen with driving your Porsche in the Docklands

**10 Compaq portable with colour VGA screen**
*A snip at £5,000*

**20 Philips flat monitor**

**30 Sony Watchman**
*So you don't miss 'Neighbours'*

**40 Mac II CX**
*So you can be just like Ben Elton*

**50 A Bit Bopper**
*The £22,000 nightclub laser video unit will do for those little parties*

**60 HyperCard 2**

**70 Sony erasable optical disk**

**80 NCube**
*The 500 million Mb, 60,000 Mips, £20 million machine should help with those household accounts*

**90 General Dynamics AH64 Attack Helicopter simulator**

**100 General Dynamics AH64 Attack Helicopter**

## Ten machines that never were.

**10 Sinclair Spectrum Loki**
*A machine which existed for two issues of Sinclair User featuring an 8MHz Z80H and Amiga-like custom chips...*

**20 Atari 130ST**
*Early 1985: Not initially launched because GEM and TOS came as a 192K program on disk.*

**30 Oric Stratos**
*Late 1984: Vanished without a trace, along with Tangerine.*

**40 Sinclair Enigma**
*The follow up to the Sinclair QL, featuring a complete WIMP environment, two 3.5 inch drives and monitor in one unit, the Psion Xchange suite on ROM and 1Mb of RAM. Sighted in diagram form in an issue of Your Computer, never heard of again.*

**50 Acorn ABC**
*Late 1984: An entire range of machines, featuring at least three different operating systems (Xenix, CP/M80 and MS-DOS) and a variety of word processors including a certain 16032.*

**60 Commodore V364**
*Early 1984: A machine with the same specs as the Plus 4 but with built in speech synthesis (250 words) and a full size keyboard.*

**70 Atari 65XEP**
*Early 1985: What was meant to be a portable version of the 65XE with a built in 3.5 inch drive and a mono monitor*

**80 Atari 65XEM**
*Early 1985: Another variant, this time with an eight channel sound chip.*

**90 Atari 260XE**
*Mid 1985: Yes, a 256K version of the 130XE in the days when the ST was £750 and definitely not a home machine.*

**100 Sinclair Pandora**
*This is possibly what lead to the Z88, but it was meant to feature Spectrum and CP/M compatibility with either a disk drive or a smart card device for storage...*

***Ahmad Alam***

## FOOTBALL BONKERS WINNERS

**The incredibly lucky winner of two tickets to see a home international, the complete range of D&H software and a football strip was G. J Galloway of Liverpool. Almost similarly fortunate were Wayne Morrison of Gateshead, Steve Carter of Gillingham in Kent, A. Ives of Abingdon, David Ovington of Worcester, M. Pinder of Preston, Sajid Safiq of Bolton, René Tym of Ashford in Kent, J. Brown of Cumbernauld, Matt Price of Woodchurch, and G. D. Mann of Walsall. They collect a copy of *Football Director*.**

# NEXT WEEK ■ NEXT WEEK ■ NEXT WEEK

## SHOPPING *EXPRESS*

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**Software and hardware to make your micro sing**
***Plus:* 32 pages of the best computing bargains**

### *PC SHOW PREVIEW*

**Full details of the year's biggest computing show, with Express' pull-out guide to the exhibitors**

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**At least as far as the games companies are concerned. A look at 1989's stocking fillers to be**

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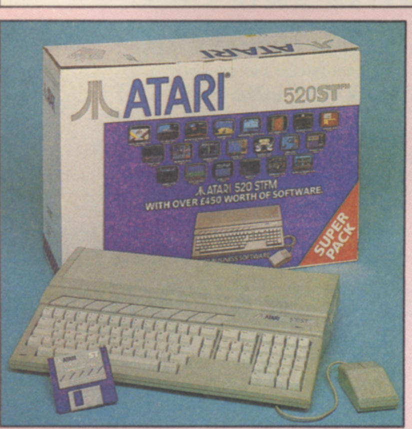
# 520ST-FM SUPER PACK



The Atari Super Pack is ideal for you if you want to get off to a flying start with the best in entertainment software. The Pack includes a 520ST-FM with ½Mb RAM, a built-in 1Mb disk drive, over £450 of top games and a joystick. If you buy the Super Pack at Silica Shop, we will add our own ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for details.

## £399
INCLUDING VAT

## 1Mb DISK DRIVE £450 OF SOFTWARE

### ARCADE GAMES

| | | |
|---|---|---|
| **Arkanoid II** | Imagine | £19.95 |
| **Beyond The Ice Palace** | Elite | £19.95 |
| **Black Lamp** | Firebird | £19.95 |
| **Buggy Boy** | Elite | £19.95 |
| **Chopper X** | Mastertronic | £9.99 |
| **Ikari Warriors** | Elite | £14.95 |
| **Marble Madness** | Electronic Arts | £24.95 |
| **Quadralien** | Logotron | £19.95 |
| **Ranarama** | Hewson Consultants | £19.95 |
| **Return To Genesis** | Firebird | £19.95 |
| **Roadwars** | Melbourne House | £19.95 |
| **Starquake** | Mandarin | £19.95 |
| **Test Drive** | Electronic Arts | £24.95 |
| **Thrust** | Firebird | £9.95 |
| **Thundercats** | Elite | £19.95 |
| **Wizball** | Ocean | £19.95 |
| **Xenon** | Melbourne House | £19.95 |
| **Zynaps** | Hewson Consultants | £19.99 |

### SPORTS SIMULATIONS

| | | |
|---|---|---|
| **Eddie Edwards Super Ski** | Elite | £19.95 |
| **Seconds Out** | Tynesoft | £19.95 |
| **Summer Olympiad '88** | Tynesoft | £19.95 |

### PRODUCTIVITY SOFTWARE

| | | |
|---|---|---|
| **Organiser** | Triangle Publishing | £49.95 |

### JOYSTICK

| | | |
|---|---|---|
| **Atari CX40 Joystick** | Atari Corp | £4.99 |

**FREE ATARI BUNDLE VALUE: £458.97**

With SM124 mono monitor: £498 INC VAT With SC1224 colour monitor: £698 INC VAT

# ATARI ST

## ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

*All prices correct at the time of going to press. E&OE.*

# 520ST-FM EXPLORER PACK
## WITH BUILT-IN 1Mb DISK DRIVE

ATARI 520ST
ST
ATARI

The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

## £260

ONLY £2.51 PER WEEK
RETURN COUPON FOR DETAILS

+VAT= £299

+ SM124 mono monitor: £398 INC VAT + SC1224 colour monitor: £598 INC VAT

# 1040ST-FM PROFESSIONAL PACK

## NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for further information.

VIP PROFESSIONAL Integrated Spreadsheet
Microsoft Write
ST BASIC
Superbase PERSONAL

## £499
INCLUDING VAT

With SM124 mono monitor: £598 INC VAT
With SC1224 colour monitor: £798 INC VAT

| | | |
|---|---|---|
| **ATARI 1040ST-FM** | (Computer) | £499.99 |
| **VIP PROFESSIONAL** | (Spreadsheet) | £149.95 |
| **MICROSOFT WRITE** | (Word Processor) | £149.95 |
| **SUPERBASE PERSONAL** | (Database) | £59.95 |
| **BASIC DISK & MANUAL** | (Language) | £24.98 |
| | **NORMAL RRP:** | **£884.82** |
| | *LESS DISCOUNT:* | *-£385.82* |
| | **PROFESSIONAL PACK PRICE:** | **£499.00** |

# 2Mb & 4Mb MEGA ST

The MEGA ST computers are styled as as lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200) both Free Of Charge. Return the coupon for further details.

| 2Mb MEGA ST | 4Mb MEGA ST |
|---|---|
| £899 INC VAT | £1199 INC VAT |
| +mono monitor=£998 | +mono monitor=£1298 |
| +colour monitor=£1198 | +colour monitor=£1498 |

# DTP PageStream £149 +VAT =£171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Seikosha SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

* TEXT-FLOW AROUND GRAPHICS
* ROTATION OF TEXT & GRAPHICS
* SLANT OR TWIST ANY OBJECT
* POSTSCRIPT COMPATIBLE
* TAG FUNCTION
* AUTO/MANUAL KERNING & HYPHENATION
* GROUPING OF OBJECTS

# WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

***SILICA STARTER KIT:*** Worth over £200, FREE with every Atari ST computer bought from Silica.

***PROFESSIONAL PACK:*** Free business software with 1040ST-FM and MEGA ST's bought from Silica.

***DEDICATED SERVICING:*** 7 full-time Atari trained staff with years of experience on Atari servicing.

***THE FULL STOCK RANGE:*** All of your Atari requirements from one place.

***AFTER SALES SUPPORT:*** The staff at Silica are dedicated to help you get the best from your ST.

***FREE CATALOGUES:*** Mailed direct to your home as soon as we print them, featuring offers as well as all of the new releases.

***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped within the UK mainland.

***PRICE MATCH PROMISE:*** We will match competitors on a 'same product same price' basis.

***FREE TECHNICAL HELPLINE:*** Full time team of Atari technical experts always at your service.

## FREE SILICA STARTER KIT WORTH OVER £200

**WITH EVERY ST - RETURN COUPON FOR DETAILS**
ALL PRICES QUOTED INCLUDE FREE UK DELIVERY

# DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

# SILICA SHOP:

**SIDCUP (& Mail Order) ............ 01-309 1111**
*1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX*
***OPEN:** MON-SAT 9am - 5.30pm* ***LATE NIGHT:** FRIDAY 9am - 7pm*

**LONDON ............ 01-580 4000**
*52 Tottenham Court Road, London, W1P OBA*
***OPEN:** MON-SAT 9.30am - 6.00pm* ***LATE NIGHT:** NONE*

**LONDON ............ 01-629 1234 ext 3914**
*Selfridges (1st floor), Oxford Street, London, W1A 1AB*
***OPEN:** MON-SAT 9am - 6.00pm* ***LATE NIGHT:** THURSDAY 9am - 8pm*

To: Silica Shop Ltd, Dept NCE 0989, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

## PLEASE SEND FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: ......... Initials: ......... Surname: ..........................

Address: ..........................

..........................

..........................

.......................... Postcode: ..........

NCE 8

Do you already own a computer
If so, which one do you own? ..........................

DTP ☐

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## COMPUTERS

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| | No Monitr | Mono | Colour | 14"EGA | 12"VGA | 14"VGA |
|---|---|---|---|---|---|---|
| **AMSTRAD** | | | | | | |
| PC2086 Single Floppy | | £569 | £664 | – | £759 | £854 |
| PC2086 Double Floppy | | £664 | £759 | – | £854 | £1139 |
| PC2086 30Mb Hard Disk | | £854 | £9491 | – | £1044 | £1139 |
| PC2286 Double Floppy | | £949 | £1069 | – | £1149 | £1259 |
| PC2286 40Mb Hard Disk | | £1149 | £1249 | – | £1349 | £1449 |
| PC2386 65Mb Hard Disk | | £1949 | £2049 | – | £2149 | £2249 |
| PC1640 Single Floppy | | £474 | £569 | £664‡ | – | – |
| PC1640 Double Drive | | £569 | £664 | £759 | – | – |
| PC1640 20Mb Hard Disk | | £759 | £854 | £949 | – | – |
| PC1512 Single Floppy | | £379 | £474 | – | – | – |
| PC1512 Double Floppy | | £474 | £569 | – | – | – |
| **TANDON** | | | | | | |
| PCA 12/SL Single Drive | – | £943 | – | £1216 | £1232 | £1332 |
| PCA 12/SL 20Mb Hard Disk | – | £1084 | – | £1357 | £1373 | £1473 |
| PCA 12/SL 40Mb Hard Disk | – | £1226 | – | £1499 | £1515 | £1615 |
| PCA 12 Single Floppy | – | £1424 | – | £1683 | £1699 | £1799 |
| PCA 12 20Mb Hard Disk | – | £1759 | – | £2014 | £2034 | £2134 |
| PCA 12 40Mb Hard Disk | – | £2010 | – | £2268 | £2285 | £2385 |
| PAC 286/12 & 30mb Datapac | – | £1676 | – | £1793 | £1808 | £1908 |
| 386/16-SF Single Floppy | – | £2178 | – | £2437 | £2453 | £2553 |
| 386/16-40 40Mb Hard Disk | – | £2513 | – | £2772 | £2789 | £2889 |
| 386/20-SF Single Floppy | – | £2513 | – | £2772 | £2789 | £2889 |
| 386/20-40 40Mb Hard Disk | – | £2890 | – | £3150 | £3165 | £3265 |
| 386/20-70 70Mb Hard Disk | – | £3121 | – | £3359 | £3375 | £3475 |
| 386/20-110 110Mb Hard Disk | – | £3247 | – | £3485 | £3501 | £3601 |
| 386/33-110 110Mb Hard Disk | – | £4869 | – | £5107 | £5123 | £5223 |
| **ATARI PCs** | | | | | | |
| PC3-DD Double Floppy | £439 | £550* | – | £850 | – | £989 |
| PC3-30 30Mb Hard Disk | £539 | £639 | – | £939 | – | £1079 |
| PC4-60 60Mb Hard Disk | £1199 | £1399 | – | £1699 | – | £1839 |
| PC5-60 60Mb Hard Disk | £1999 | £2259 | – | £2399 | – | £2799 |
| **EPSON PCs** | | | | | | |
| AX2 20Mb Hard Disk | £1099 | – | – | £1249 | £1279 | £1379 |
| AX-40 40Mb Hard Disk | £1449 | – | – | £1599 | £1599 | £1799 |
| AX-80 80Mb Hard Disk | £1899 | – | – | £2259 | £2289 | £2379 |
| PCe 20Mb Hard Disk | £1059 | – | – | £1165 | – | – |
| PCe Double Floppy | £719 | – | – | £1029 | – | – |
| **IBM** | | | | | | |
| PS/2 Model 30 Twin Floppy | – | £849 | £999 | £1199 | £1099 | £1199 |
| PS/2 Model 30 Mb Disk | – | £1079 | £1119 | £1319 | £1219 | £1319 |
| PS/2 30-286 Hard Disk | – | £1449 | £1549 | £1749 | £1599 | £1749 |
| **SCHNIEDER** | | | | | | |
| Euro PC | – | £399 | £549 | – | – | – |
| 286 AT 512K Single Floppy | – | – | – | £779 | £929 | £1029 |
| 286 AT 1Mb 20Mb Hard Disk | – | – | – | £1579 | £1679 | £1779 |
| **OLIVETTI PCs** | | | | | | |
| M250 20Mb Hard Disk | – | £1799 | – | £2199 | – | – |
| M290 AT 20Mb Hard Disk | – | £2199 | – | £2399 | – | – |
| M290 AT 40Mb Hard Disk | – | £2599 | – | £2899 | – | – |
| M380 386 60Mb Hard Disk | – | £3099 | – | – | – | £2979 |
| M200 20Mb HD Twin Floppy | – | £1099 | – | – | – | – |

‡ Atari Mono Monitor is an EGA Mono. † Tandon VGA White Monitor * Amstrad 12" EGA (ECD)

## PORTABLES

| | cpu | | No of Flpy | Hard Disk | Screen Type | Our Price |
|---|---|---|---|---|---|---|
| **TOSHIBA** | | | | | | |
| T5200 | 386 | 20MHz | 1x1.44 | 100Mb | Plsma | £5095 |
| T5100 | 386 | 16MHz | 1x1.44 | 40Mb | Plsma | £3599 |
| T3200 | 286 | 12MHz | 1x1.44 | 40Mb | Plsma | £2995 |
| T1600 | 286 | 12MHz | 1x1.44 | 20Mb | LCD | £2599 |
| T1200HD | 8086 | 10MHz | 1x720 | 20Mb | LCD | £1795 |
| T1200FD | 8086 | 10Mhz | 2x720 | – | LCD | £1299 |
| T1100 Plus | 8086 | 4.7MHz | 1x720 | – | LCD | £1039 |
| **SHARP** | | | | | | |
| PC-4602 | 8086 | | 2x720 | – | LCD | £1099 |
| PC-4641 | 8086 | | 1x720 | 20Mb | LCD | £1859 |
| PC-5541 | 286 | 12MHz | 1x720 | 20Mb | LCD | £2969 |
| **EPSON** | | | | | | |
| Portable FDD | V30 | 10MHz | 2x720 | – | LCD | £925 |
| Portable HDD | V30 | 10MHz | 1x720 | 20Mb | LCD | £1479 |
| **AMSTRAD** | | | | | | |
| PPC512 | 8086 | 8Mhz | 1x720 | – | LCD | £379 |
| PPC512D | 8086 | 8MHz | 2x720 | – | LCD | £521 |
| PPC640 | 8086 | 8MHz | 1X720 | – | LCD | £474 |
| PPC640D | 8086 | 8MHz | 2X720 | – | LCD | £617 |
| **ZENITH** | | | | | | |
| 184 | 8088 | 8MHz | 2x720 | – | LCD | £1255 |
| 184-2 | 8088 | 8MHz | 1x720 | 20Mb | LCD | £2059 |
| ZP 286-02 | 286 | 12MHz | 1x720 | 20Mb | LCD | £2795 |
| ZP 286-04 | 286 | 12MHz | 1x720 | 40Mb | LCD | £3595 |
| ZP 386-04 | 386 | 12MHz | 1x720 | 40Mb | LCD | £4495 |

## MICE

| | |
|---|---|
| Logitech Logimouse C7 with 'Plus' Software Package | £79 |
| Mouse Systems Optical Serial or Bus Mouse w/Pop-Up Menus | £105 |
| Microsoft Bus or Serial Mouse – Mouse Menus/Paintbrush | £99 |
| Microsoft Bus or Serial Mouse – With Paintbrush/Windows | £109 |

## HARD DISKS

| | |
|---|---|
| Western Digital 32Mb FileCard – Hard Disk On A Card. | £221 |
| Seagate ST225 20Mb Hard Disk w/WD controller & cables. | £214 |
| Seagate ST251 40Mb Hard Disk 40ms Access & Controller | £350 |
| Seagate ST251 40Mb Hard Disk 28ms Access (Drive only). | £372 |
| Plus HardCard 20Mb or 40Mb – the original Hard Card. | £499/636 |

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## PRINTERS

| | Speed | | |
|---|---|---|---|
| **9-PIN NARROW DOT MATRIX** | | | |
| Epson LX800 – The Brand Leader! Best Seller! | 150/40 | NLQ | £155 |
| Epson FX850 – The Quality Choice. | 220/45 | NLQ | £359 |
| Epson EX800 – Super Fast, Super Value! | 259/50 | NLQ | £440 |
| Panasonic 1180 – 4 Fonts and More Speed. | 192/38 | NLQ | £170 |
| Panasonic 1081 – For Low Priced Performance. | 120/24 | NLQ | £151 |
| Star LC10 – Everybody's Favourite Budget Printer! | 144/36 | NLQ | £153 |
| **9-PIN WIDE DOT MATRIX** | | | |
| Epson FX1050 – Its new and even faster. | 220/45 | NLQ | £429 |
| Epson EX1000 – A Popular Workhorse! | 250/50 | NLQ | £599 |
| Panasonic P1592 – A Real Bargain, Mate! | 120/24 | NLQ | £290 |
| Star NX-15 – Rugged, Reliable and Fast. | 120/30 | NLQ | £279 |
| **24-PIN DOT MATRIX NARROW** | | | |
| Epson LQ860 – New 24-Pin, Colour As Standard. | 290/88 | LQ | £580 |
| Epson LQ550 – Low Cost But Great Value. | 150/50 | LQ | £299 |
| NEC P2200 – The NEC Challenge in Price/Performance! | 168/56 | LQ | £289 |
| Oki Microline 390 – Robust and Feature Packed. | 270/90 | LQ | £480 |
| Seikosha SL80 – Perfect Letter Quality | 135/54 | LQ | £289 |
| Star LC24-10 – Low cost alternative to Epson. | 170/57 | LQ | £299 |
| Star NB24-10 – With Versatile Font Options. | 216/72 | LQ | £457 |
| **24-PIN DOT MATRIX WIDE** | | | |
| Epson LQ2550 – The Ultimate Printer. | 333/111 | LQ | £899 |
| Epson LQ1050 – The Most Popular Wide Carriage. | 290/88 | LQ | £599 |
| Epson LQ1060 – New 24-Pin, Colour As Standard. | 290/88 | LQ | £699 |
| NEC P6 Plus – The New Reliable 24-pin Printer. | 265/90 | LQ | £479 |
| NEC P7 Plus – One of the Best 24-Pin Sellers Ever. | 265/90 | LQ | £629 |
| **HIGH SPEED PRINTERS** | | | |
| Epson DFX5000 – With Automatic Paper Feed. | 533/80 | LQ | £1159 |
| Hewlett Packard RuggedWriter – Reliability Itself. | 480/240 | LQ | £899 |
| Oki 393 – Will Run For Years And Years. | 450/120 | LQ | £799 |
| **DAISY WHEEL** | | | |
| Brother HR20 – True Letter Quality. | 20 | LQ | £429 |
| Brother HR40 – Quality With Free Sheet Feeder. | 40 | LQ | £785 |
| Juki 6300 – The Champion of Champions. | 40 | LQ | £630 |
| **COLOUR** | | | |
| Star LC-10 Colour – Best Cheap 80 column Colour! | 144/36 | NLQ | £195 |
| Cannon Ink Jet – 7 Colour Wide Carriage. | 37 | NLQ | £459 |
| HP PaintJet – 1,000s of Colour Shades. | – | – | £799 |
| NEC P565XL – Heavy-Duty Colour Favourite! | – | – | £746 |
| Oki 393C – Rugged, Reliable Colour Printer. | 450/120 | LQ | £912 |
| Xerox 4020 – Colour Printer for Ventura. | 133 | – | £1099 |
| **INK JET** | | | |
| Cannon Bubblejet – Silence At Last! | – | – | £755 |
| Epson SQ2550 – Epson's Ink Jet Winner | 540/90 | – | £890 |
| HP DeskJet – Now Even Lower in Price. | – | – | £540 |

## LASERS

| | Speed | |
|---|---|---|
| HP LaserJet Series II – The Best Laser Printer. | 8ppm | £1484 |
| HP LaserJet IID – With Dual Bin and Feeds Envelope. | 8ppm | £2174 |
| Brother HL-8 – The Reviewers Love This Laser. | 8ppm | £1529 |
| Cannon LBP-8II T – Twin Bin with Cannon Quality. | 8ppm | £1779 |
| Cannon LBP-8III – Scalable Fonts, and 1.5Mb RAM. | 8ppm | £2145 |
| Epson GQ5000 – Now with Free On-Site Maintenance. | 6ppm | £1287 |
| Kyocera F1000 – High Quality for the Professional. | 10ppm | £1589 |
| Panasonic KX-P4450 – Super-Fast and Compatible. | 11ppm | £1489 |
| Quine CrystalPrint WP – Crystal Quality, A Gem Price. | 6ppm | £970 |
| HP DeskJet Plus – LaserJet Quality at InkJet Price. | 3.5ppm | £619 |

## PLOTTERS & DIGITIZERS

| | Size | |
|---|---|---|
| Roland DXY-880A – Low on Cost, High on Features. | A3 | £562 |
| Roland DXY-1100 – New Range of Fast Plotters. | A3 | £679 |
| Roland DXY-1200 – 8 Pen with Dual Interface. | A3 | £949 |
| Roland DXY-1300 – 1 Mb Memory Plotter. | A3 | £1111 |
| Roland DPX-2200 – Flat-Bed Plotter. | A2 | £2815 |
| Hewlett-Packard HP-7440A Colourpro. | A4 | £719 |
| Hewlett-Packard HP-7475A Graphics. | A3/4 | £1079 |
| Hewlett-Packard HP-7550 Graphics Plus, 8 pen | A3/4 | £2689 |
| Hewlett-Packard HP-7570A Draftpro. | A1/2 | £2789 |
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| GEM First Word Plus – Ideal for Self-Teach WP. | £158.68 |
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